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SUMMARY
REPORT
CANADA
HEALTH ATTITUDES
AND BEHAVIOURS
SURVEY

9, 12 and 15
Year Olds

1984-85



Health and Welfare
Canada

Santé et Bien-être social
Canada



SOCIAL PROGRAM EVALUATION GROUP
QUEEN'S UNIVERSITY AT KINGSTON

SUMMARY REPORT CANADA HEALTH ATTITUDES AND BEHAVIOURS SURVEY

**9, 12 and 15
Year Olds**

1984-85

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QUEEN'S UNIVERSITY AT KINGSTON

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This report reflects the views of the Social Program
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not necessarily those of Health and Welfare Canada.




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*For affiliation of advisory group members and provincial and territorial coordinators, see Appendix.

CHAPTER I

INTRODUCTION

The Canada Health Attitudes and Behaviours Survey: 9-, 12- and 15-Year-Olds 1984-85 was designed to determine the health-related attitudes and behaviours of young Canadians. The study was conducted by the Social Program Evaluation Group of Queen's University with support from an advisory group of health educators from across Canada. The purpose was to complement an earlier study, Canada Health Knowledge Survey: 9-, 12- and 15-Year-Olds - 1982-83, and to provide a solid base of information from which initiatives could be taken by the Health Promotion Directorate of Health and Welfare Canada and by health educators in the provinces and territories to decrease self-imposed health risks and promote healthy lifestyles among young Canadians.

A. BACKGROUND

A mandate of Health and Welfare Canada is to research and implement programs that effectively promote self-responsibility in the field of health. Health education is a vehicle by which health promotion goals can be implemented; that is: 1) to inform individuals of, and increase public awareness in, the areas of personal risk to health, and 2) to delineate specific actions which may be taken by individuals to reduce this risk.

To influence adults to alter existing lifestyle patterns and establish patterns which will prevent the development of chronic disease is difficult, whereas, to mould the developing attitudes and behaviour patterns of young people is a more realistic goal. The motivation behind

the implementation of both the knowledge and the attitudes and behaviours surveys is based on this premise.

There seems to be little question that the findings of the first survey have had impact throughout Canada. Each province's findings provided impetus for curriculum planning not only within provincial education departments, but also within individual school boards and schools. Also, Health Promotion Directorate personnel have used the results to plan media campaigns, as well as seminars and workshops for health educators and health promotion personnel in the provinces. Most of all, the study has contributed toward an increased awareness of strengths and deficiencies in the health knowledge of young Canadians.

The purpose of this Attitudes and Behaviours Survey was to identify the attitudes and behaviours of young people aged 9, 12 and 15 with regard to selected health and safety issues.

B. TARGET POPULATION

In order to obtain a longitudinal picture of the development of health attitudes and behaviours, ideally, young people of all ages should be surveyed, but the costs involved in producing provincial samples for all age groups are prohibitively high. To keep the cost of the study within reasonable limits, a longitudinal analysis was simulated by surveying three different age groups, 9-, 12- and 15-year-olds.

The 9-year-old group was selected because 9 is the youngest age at which children can capably handle paper and pencil self-report instruments--the

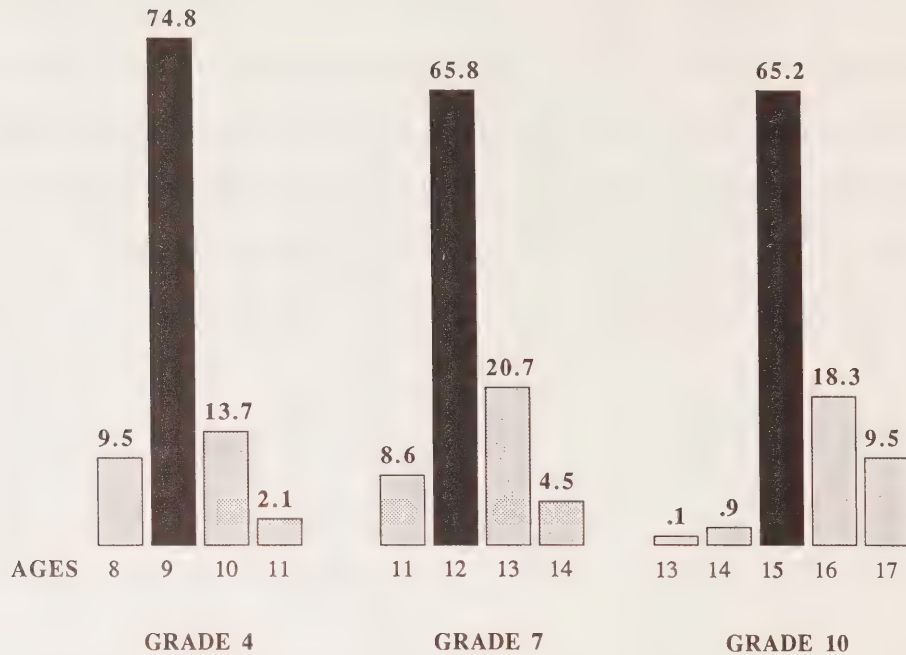
most cost-effective method of collecting information. Twelve years of age is when, for most young people, concerns begin to arise because of the physical and emotional changes occurring at puberty. Age 15 represents the age when they encounter considerable social pressure to adopt health-risk behaviours (e.g., to use alcohol and drugs). Also, young people at that age may not have another opportunity for formal health instruction because students can drop health and physical education courses or even leave school the following year.

Excluded from the study were: (1) private schools; (2) special education or remedial classes; (3) very small schools (except in the territories) where the grade enrolment would not reach 20 students.

The surveys were administered to school classes for purposes of efficiency and controlled administration, and specifically to Grades 4, 7 and 10 because the average age of the students would be very close to 9, 12 and 15 years, respectively. Figure 1.1 displays the ages of the students who participated in the survey. The number of respondents was 10 833 for the Grade 4 Survey, 11 291 for Grade 7, and 10 987 for Grade 10 for a total of 33 111 survey respondents. The overall response rate was 99 per cent.

FIGURE 1.1

AGES OF SURVEY RESPONDENTS



C. SURVEY INSTRUMENTS

The first step in the development of the instruments was to select appropriate health topics for each grade level. As in the previous study, the national advisory group of health educators agreed on the choice of and coverage within topics. In addition, specialists in particular health areas (e.g., nutrition, dental health and fitness) were consulted about content to ensure accuracy. Nutrition and physical and leisure activity were judged to be the most important content areas, and, to be covered effectively, it was necessary for them to make up a major part of each of the three surveys.

The final instruments comprised three sections for Grade 4 (Nutrition, Leisure-Time Activities, and Health Attitudes and Behaviours), and four sections for each of Grades 7 and 10 (the same as Grade 4 plus Alcohol, Drugs and Tobacco).

The health topics covered in the survey instruments were as follows:

- Grade 4 Survey: Nutrition, Leisure-Time Activities, Safety, Parent-Child Relationships, Peer Influence, Smoking, Self-Esteem, Body Image, Dental Health and Mental Health.
- Grade 7 Survey: Same as Grade 4 plus Alcohol, Drugs and Tobacco, and Sex and Family Roles.
- Grade 10 Survey: Same as Grade 7 plus Sources of Information about Sex Education.

D. INTERPRETING THE FINDINGS

The sample of students was selected in such a way that for each province, ninety times out of a hundred, the responses can be expected to lie within plus or minus five percentage points from the response obtained, had the entire grade population been surveyed. Except for the provincial analyses, the numbers reported in tables and figures are weighted to take into account differences in each province's population at each grade level. The surveys were conducted in English and French depending on the main language of the respondents, but the results are not presented to show language differences.

A simple rule of thumb can be used when assessing the statistical significance of differences between groups of respondents. A difference of five per cent between two measures (e.g., the proportion of females and males who eat whole grain breads daily) can be considered statistically significant at the 95 per cent level of confidence.

Much more detail about the design of the study is provided in another volume called Canada Health Attitudes and Behaviours Survey: 9-, 12- and 15-Year-Olds, 1984-85: Technical Report. Statistical procedures used to establish the validity and reliability of scales (e.g., self-esteem and parent-child relationship) are described along with the rationale for determining categories (e.g., physical activity levels, high salt consumption) used in the comparative analyses. The Technical Report incorporates all the major tables and figures produced for the study.

CHAPTER II

NUTRITION

A. INTRODUCTION

The eating habits of young Canadians are of concern to health professionals because of the special characteristics of this population. These young people are in a period of rapid physical growth which creates greater demands for energy and most, if not all, nutrients. They are undergoing emotional and psychological changes during which there can be a tendency to reject conventional diets and adopt alternate dietary patterns unsuitable for meeting energy and nutrient needs; that is, they may skip meals, eat nutritionally-poor snacks, and follow "fad diets" to maintain or improve appearance.

In this study, a number of issues identified by nutrition researchers have been expanded upon and clarified. The following questions have received particular attention in the analysis:

- 1) Are diets balanced in a manner consistent with the suggestions of Canada's Food Guide?
- 2) What is the proportion of young Canadians who skip breakfast?
- 3) What is the relationship between dietary patterns and obesity?
- 4) What is the relationship between young people's nutritional attitudes and their corresponding behaviours?

Our general approach to this analysis is based on two fundamental assumptions. First, there is general agreement on what constitutes the basic principles of a good diet, and, in this regard, Canada's Food Guide incorporates useful guiding principles while addressing food availability

and individual food preference. Second, patterns of dietary behaviour established in youth strongly influence those of adulthood.

A major challenge of the analysis was to establish useful categories of nutritional behaviour. We used Canada's Food Guide, nutritional research, and the advice of our nutritionists and other health advisors to identify categories of appropriate and inappropriate nutrition behaviours. It was agreed that to be eating "appropriately," a young person must eat from the four food groups the equivalent of each day, and with a certain amount of variety from each of the food groups over each week. The measures were based on food choices and frequency of use, not on specific quantities.

B. BALANCED DIET

Each of the 32 nutrition items appearing in the survey instrument was classified as a food "type" falling within a food group. The foods were "typed" using two criteria: first, they contained something in quantity that is used in a secondary analysis (e.g., fat, sugar or salt), and second, they were a major source of one or more nutrients not available to the same extent in other food types within a food group (e.g., the yellow vegetable type). For example, the item "Milk shakes, ice cream, pudding, chocolate milk" covers one of the four food "types" in the Milk and Milk Products group, and is high in sugar. To be eating appropriately, a respondent had to meet two criteria reflecting frequency of food choice.

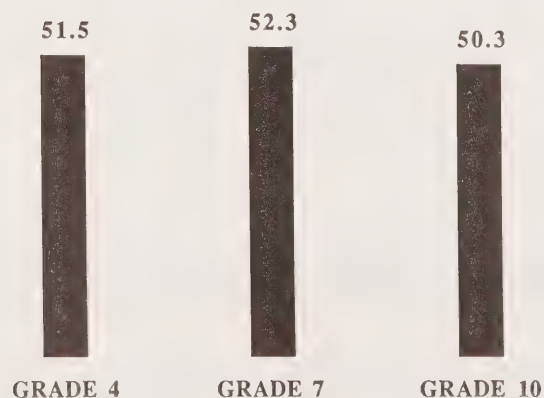
To meet the "daily" criterion, the respondent had to eat from each of the four food groups usually every day. To meet the "variety" criterion, the respondents had to eat as follows on a weekly basis:

- . Milk and Milk Products - at least two different types of foods;
- . Breads and Cereals - at least two different types of foods with one being either whole grain cereals or whole grain bread;
- . Meat, Fish, Poultry and Alternates - at least three different types of food; and,
- . Fruits and Vegetables - at least two different types of food from each of fruits and vegetables.

1. The Four Food Groups

The percentages of respondents meeting the "daily" and "variety" criteria are presented in Figure 2.1. Nearly one-half of these young Canadians were not "eating appropriately", with little difference in the proportions across the three grades.

FIGURE 2.1
PERCENTAGE OF YOUNG PEOPLE MEETING THE DAILY AND
VARIETY CRITERIA FOR THE
FOUR FOOD GROUPS



Almost one-third of all respondents were not meeting the "daily" and "variety" criteria in one food group and an additional 12 to 14 per cent in two groups (see Table 2.1). The Fruits and Vegetables group accounted for the large majority of missing groups, with Breads and Cereals a distant second.

TABLE 2.1
PERCENTAGE OF YOUNG PEOPLE NOT MEETING DAILY OR
VARIETY CRITERIA IN ONE OR MORE FOOD GROUPS

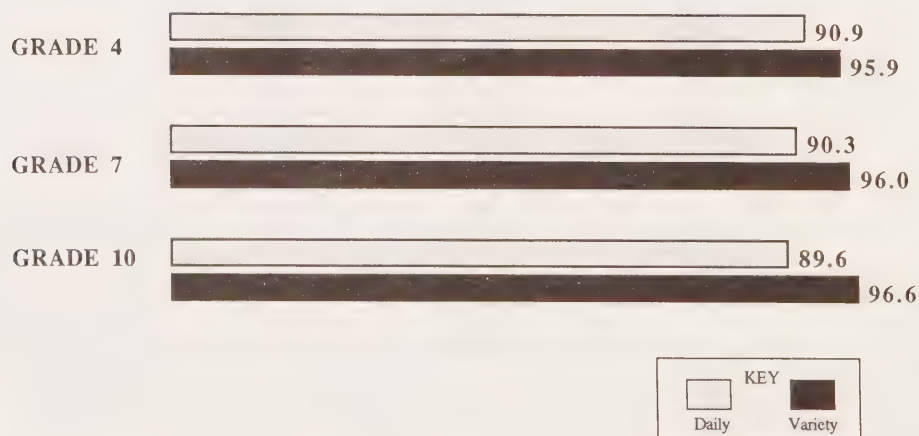
GRADE	1 GROUP	2 GROUPS	3 GROUPS
4	31.9	12.0	3.7
7	31.7	12.0	3.2
10	31.6	14.3	3.4

2. Milk and Milk Products

For the purpose of this study, the Milk and Milk Products group was divided into four types of foods: (1) milk and yogurt; (2) cheese spreads or cheese slices; (3) other cheese (e.g., cheddar, mozzarella, cottage cheese); and (4) milk shakes, ice cream, pudding, chocolate milk.

Figure 2.2 shows that about 90 per cent of young Canadians met the "daily" criterion for Milk and Milk Products at all three grade levels, and about 96 per cent met the "variety" criterion.

FIGURE 2.2
PERCENTAGE OF YOUNG PEOPLE MEETING THE DAILY AND
VARIETY CRITERIA FOR THE
MILK AND MILK PRODUCTS GROUP

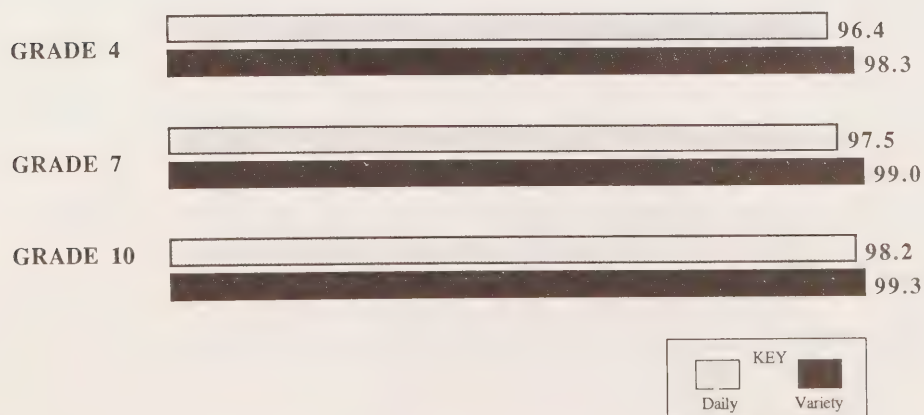


3. Meat, Fish, Poultry and Alternates

The Meat, Fish, Poultry and Alternates group was divided into eleven types of foods for our survey: (1) cheese spreads or cheese slices; (2) other cheese (e.g., cheddar, mozzarella, cottage cheese); (3) red meat (e.g., beef, hamburger, pork or lamb); (4) organ meats (e.g., liver or kidney); (5) fish (e.g., fish sticks, fillets, salmon or tuna); (6) shellfish (e.g., shrimp, lobster or crab); (7) nuts or peanut butter; (8) hot dogs, sausages, bacon or lunch meats (e.g., salami or bologna); (9) poultry (e.g., chicken, turkey, duck); (10) eggs (alone or in foods like french toast or eggnogs); and, (11) beans (e.g., pork and beans or chili). Cheeses were included in both food groups because they contain nutrients applicable to both (e.g., calcium for Milk and Milk Products and protein for Meat, Fish, Poultry and Alternates).

Nearly all respondents met both "daily" and "variety" criteria in the Meat, Fish, Poultry and Alternates group in all three grades (see Figure 2.3).

FIGURE 2.3
PERCENTAGE OF YOUNG PEOPLE MEETING THE DAILY
AND VARIETY CRITERIA FOR THE
MEAT, FISH, POULTRY & ALTERNATES GROUP



4. Breads and Cereals

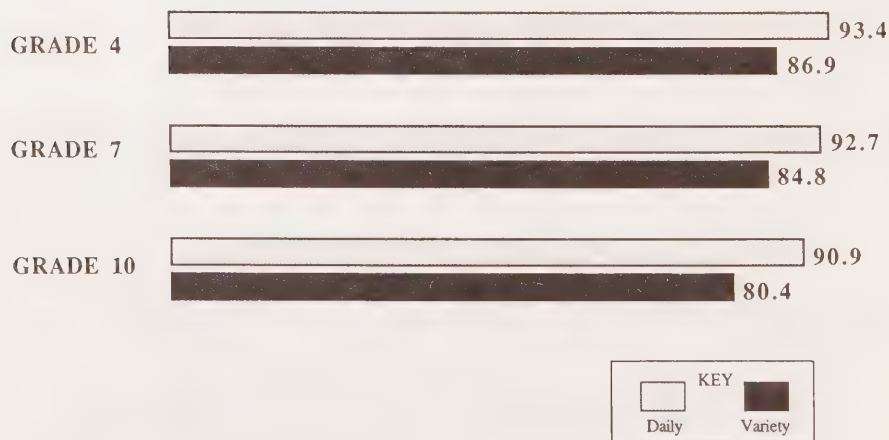
The Breads and Cereals group was divided into five types of foods:

(1) whole grain cereals (e.g., oatmeal porridge, Bran Flakes, granola or Shredded Wheat); (2) other cereals (e.g., Corn Flakes, Cheerios, Rice Krispies); (3) whole grain breads (e.g., brown breads, brown muffins or rolls); (4) white bread, crackers or white buns; and, (5) rice, macaroni or spaghetti.

Most of the respondents met the "daily" and "variety" criteria, although the proportion decreased from Grade 4 to Grade 10 (see Figure 2.4).

Meeting the whole grain cereals or breads requirement (see p. 9) proved to be the main difficulty in attaining "variety" in this food group.

FIGURE 2.4
PERCENTAGE OF YOUNG PEOPLE MEETING THE DAILY
AND VARIETY CRITERIA FOR THE
BREADS AND CEREALS GROUP



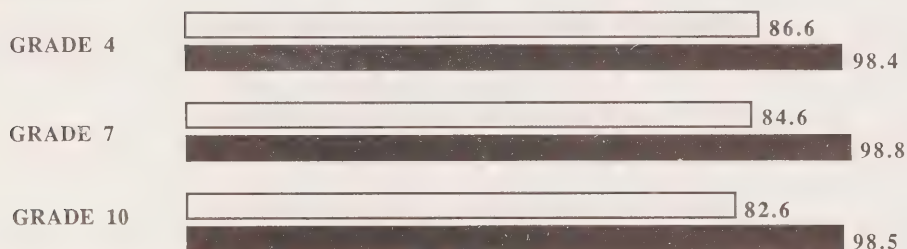
5. Fruits and Vegetables

The Fruits and Vegetables group was divided into five types of foods: (1)

fruits (e.g., orange, grapefruit, apple, banana, grapes); (2) fruit juices (e.g., orange, apple or grapefruit); (3) yellow vegetables (e.g., carrots, squash or sweet potatoes); (4) potatoes; and, (5) green vegetables (e.g., peas, green beans, lettuce, cabbage or broccoli). Figure 2.5 summarizes the findings, first by treating fruits and vegetables separately, and then together.

FIGURE 2.5
PERCENTAGE OF YOUNG PEOPLE MEETING THE DAILY
AND VARIETY CRITERIA FOR THE
FRUITS AND VEGETABLES GROUP

FRUITS



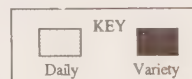
VEGETABLES



FRUITS AND VEGETABLES*



* Must meet the criteria for use of both Fruits and Vegetables



There was a slight drop from Grade 4 to Grade 10 in the percentage of respondents meeting the "daily" criterion for fruit, but the proportion of respondents meeting the "variety" criterion was much the same for all grades. The number of young people eating vegetables daily was low enough to be of concern to both parents and educators. For example, approximately 30 per cent of Grade 4 students reported they did not eat vegetables daily (24% in Grade 7 and 23.6% in Grade 10).

The percentages of respondents who met the "daily" criterion for the Fruits and Vegetables group were particularly low in comparison with those obtained for the other three food groups. The percentages for "variety" were much higher, and there was a slight increase from Grade 4 to Grade 10.

In summary, nearly half the respondents were not eating balanced diets consistent with the suggestions of Canada's Food Guide. The main problem areas seem to be with meeting the vegetables and whole grain breads and cereals requirements.

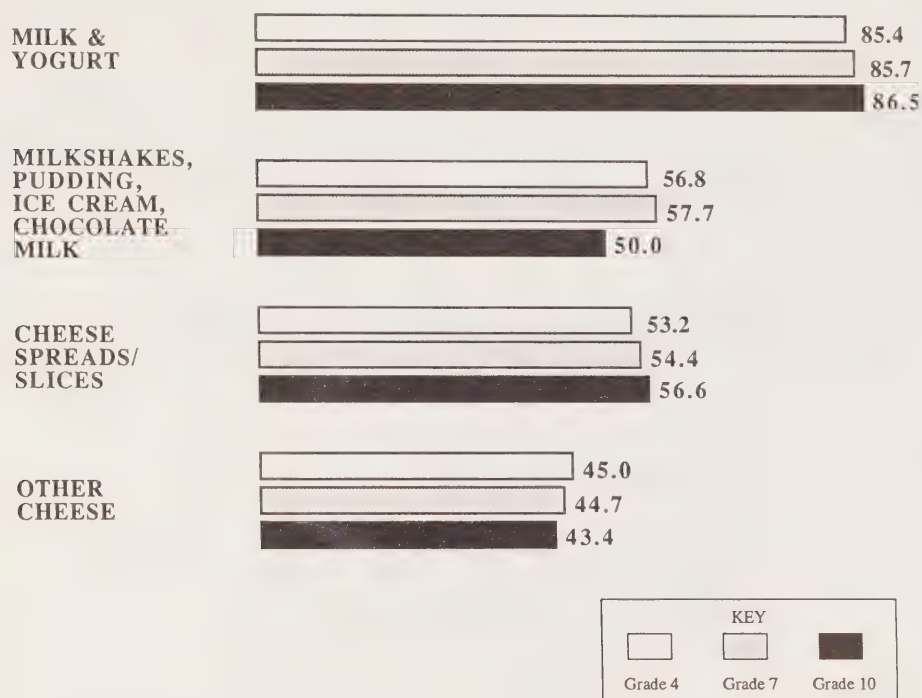
C. PATTERNS OF FOOD USE

1. Food Types Within Food Groups

Of particular interest are the changes in patterns of food-use as young people mature and begin to gain more control over the selection of their foods. We analyzed the selection of food "types" within each food group and combined the responses "two or three times a week" and "usually every day" to ensure that important foods (e.g., yellow vegetables, fish, beans) not typically eaten every day are adequately represented. Figure 2.6 presents this analysis for the food types in the Milk and Milk Products group.

FIGURE 2.6

PERCENTAGE OF YOUNG PEOPLE EATING/DRINKING FOOD TYPES FROM THE
MILK AND MILK PRODUCTS GROUP
AT LEAST 2 TO 3 TIMES A WEEK

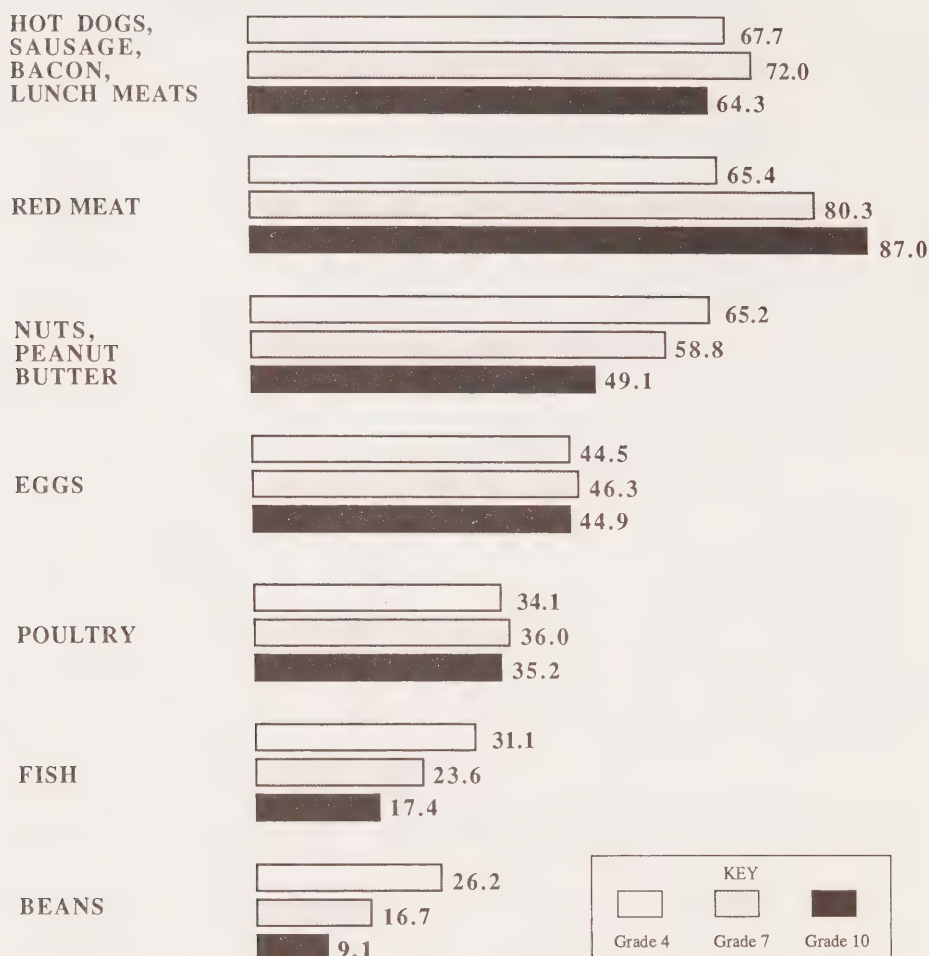


Overall, there is little difference in food use from grade to grade. Most respondents used milk and yogurt at least two or three times a week. Milkshakes, pudding, ice cream and chocolate milk ranked quite high in use, particularly among Grades 4 and 7 students, and declined significantly by Grade 10. Patterns of eating of cheeses was similar at all grade levels.

Figure 2.7 presents the patterns of use for the seven food types most often eaten from the Meat, Fish, Poultry and Alternates group. Shellfish and organ meats were excluded because they are rarely eaten, and the two cheese types are presented in the Milk and Milk Products group.

FIGURE 2.7

PERCENTAGE OF YOUNG PEOPLE EATING FOOD TYPES FROM THE
MEAT, FISH, POULTRY AND ALTERNATES GROUP
AT LEAST 2 TO 3 TIMES A WEEK



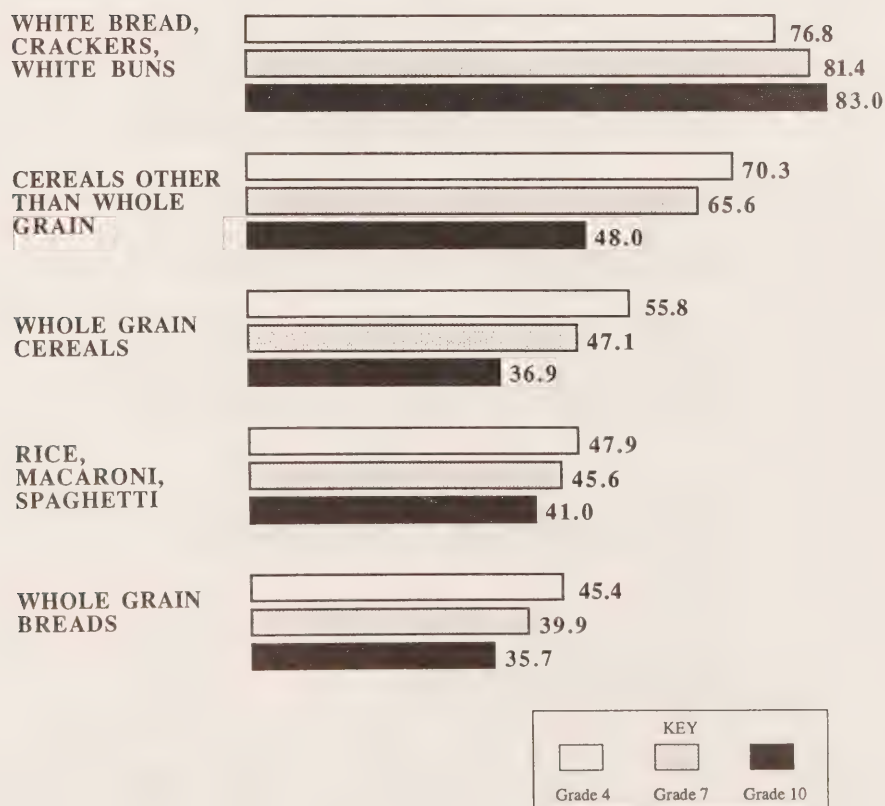
There was an increase from Grade 4 to Grade 10 in the proportion of respondents eating red meat. A large proportion of respondents in all three grades ate foods from the category "hot dogs, sausage, bacon and luncheon meat" at least two or three times a week, with a significant decline shown from Grade 7 to 10. Nuts and peanut butter were eaten regularly by two-thirds of the Grade 4 respondents, but only by half of the Grade 10 respondents. Eggs and poultry are eaten regularly by a large

segment of the respondent population, but less frequently than the aforementioned food types. As young people gain more control over the selection of foods, there is a significant reduction in the proportion that eat fish and beans.

The large proportion of respondents eating "white bread, crackers and white buns" increases from Grade 4 to Grade 10. Similarly, there is a decrease in the lesser proportion eating "whole grain breads" and this could be considered a negative trend (see Figure 2.8). There is also a significant decrease in the proportion eating whole grain cereals.

FIGURE 2.8

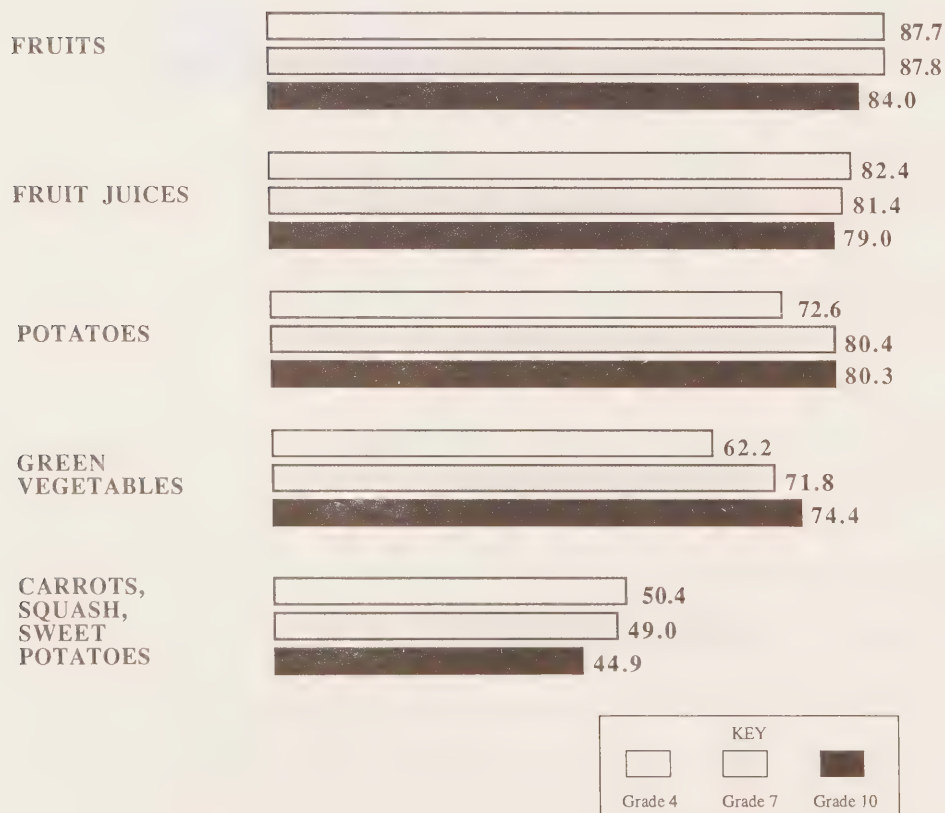
PERCENTAGE OF YOUNG PEOPLE EATING FOOD TYPES FROM THE
BREADS AND CEREALS GROUP
AT LEAST 2 TO 3 TIMES A WEEK



The vast majority of respondents in all grades took fruits and fruit juices regularly (see Figure 2.9). Potatoes were also eaten at least two or three times a week by a high proportion of respondents, with significantly more in Grades 7 and 10 than Grade 4.

The relatively low proportion of students eating vegetables regularly is similar to the findings of most studies about adolescents' nutrition. There is a significant increase between Grades 4 and 10 in the use of green vegetables, while the use of yellow vegetables shows a significant decline between Grades 4 and 10.

FIGURE 2.9
PERCENTAGE OF YOUNG PEOPLE EATING FOOD TYPES FROM THE
FRUITS AND VEGETABLES GROUP
AT LEAST 2 TO 3 TIMES A WEEK



2. Snack Foods

To encourage young people to eat snack foods high in nutrition instead of those high in sugar and fat would be a positive measure, but this might be difficult in view of the students' responses to the item "I would choose candy or chips for a snack instead of raw fruits or vegetables" (see Table 2.2). Two-thirds or more, with an increase from Grades 4 to 10, would choose the less nutritious snack at least "some of the time."

TABLE 2.2
PERCENTAGE OF YOUNG PEOPLE RESPONDING TO
"I WOULD CHOOSE CANDY OR CHIPS FOR A SNACK
INSTEAD OF RAW FRUITS OR VEGETABLES"

GRADE	RARELY	SOME OF THE TIME	MOST OF THE TIME
4	35.9	42.7	21.4
7	28.5	50.5	21.0
10	29.3	48.9	21.8

3. Breakfast

Eating breakfast contributes important nutrients to the total daily intake, and will help to increase a student's energy level during the morning hours. The percentage of students who "rarely" eat breakfast increases sharply from Grade 4 to Grade 10 (see Table 2.3); correspondingly, while three-quarters eat breakfast "most of the time" in Grade 4, less than two-thirds do so by Grade 10.

TABLE 2.3
PERCENTAGE OF YOUNG PEOPLE RESPONDING TO
"I EAT BREAKFAST (AT LEAST JUICE AND TOAST OR CEREAL)"

GRADE	RARELY	SOME OF THE TIME	MOST OF THE TIME
4	6.0	18.9	75.0
7	10.7	20.6	68.7
10	20.0	19.9	60.2

4. Sugar

Canada's Food Guide suggests moderation in sugar intake. While pleasing to the palate, from a health point of view, sugar and other caloric sweeteners can cause problems. A diet rich in sugar places a burden on other dietary components which must compensate for the lack of nutrients in sweeteners. Sugar also contributes to tooth decay. For this study, we used a measure of the pattern of use of foods high in sugar. For this purpose, we classified certain food types as "high in sugar," and then analyzed the daily and weekly use of these by young people.

Table 2.4 indicates the foods that were used in the analysis, and the proportion of students using them usually every day. The main source of sugar in the diet for Grades 4 and 7 were "fruit drinks," followed by "milk shakes, ice cream, pudding or chocolate milk." The Grade 10 students most often reported eating/drinking "doughnuts, cookies, pastry or cake," "soft drinks" and "fruit drinks." There is a significant increase in the use of "soft drinks" from Grade 4 to 10.

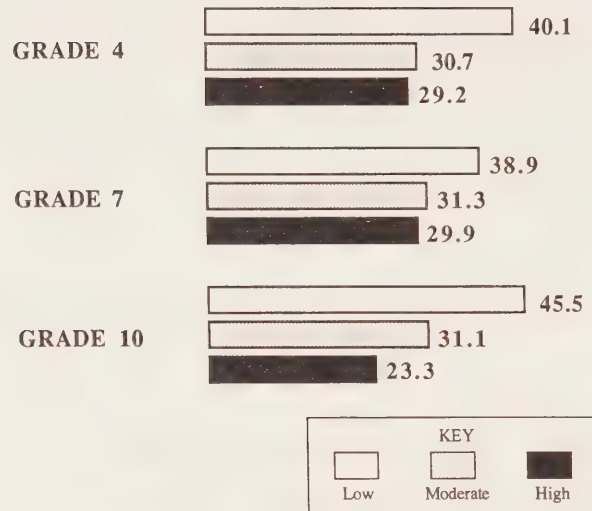
TABLE 2.4
PERCENTAGE OF YOUNG PEOPLE EATING/DRINKING FOODS HIGH IN SUGAR
USUALLY EVERY DAY

ITEM	GRADE 4	GRADE 7	GRADE 10
Milk shakes, ice cream, pudding or chocolate milk	27.4	24.0	17.6
Doughnuts, cookies, pastry or cake	23.9	22.1	22.8
Honey, jams, jelly or syrups	24.9	18.8	15.1
Candy (e.g., licorice, jelly beans, chocolate)	17.4	18.4	15.2
Soft drinks such as colas or ginger ales (not diet drinks)	17.0	22.0	25.3
Fruit drinks (e.g., Tang, Hi-C, Kool-Aid)	35.4	33.6	23.6

We also analyzed the general use of "high-sugar" foods. A respondent was classified as having a high-sugar-content diet if he/she ate 25 or more "high-sugar" foods per week (low - 1-13 a week; moderate - 14-24 a week). Figure 2.10 shows that the proportion of young people in the "high" consumption category is about the same for Grades 4 and 7 and decreases significantly in Grade 10. Similarly, there is an increase in "low" consumption from Grade 4 to 10.

FIGURE 2.10

PERCENTAGE OF YOUNG PEOPLE CLASSIFIED AS
LOW, MODERATE AND HIGH IN CONSUMPTION OF
FOODS HIGH IN SUGAR



5. Salt (Sodium Chloride)

Recent scientific research indicates that excessive consumption of salt increases the risk of high blood pressure in genetically susceptible adults. Consequently, primary prevention of high blood pressure should include efforts to moderate salt intake. Canada's Food Guide recommends moderation of salt intake. Canadians can do this by using less salt in cooking, tasting foods before adding salt, and moderating the use of salty foods.

In this study, we classified certain food types as "high in salt," and then analyzed the use of these food types at all grade levels. Table 2.5 indicates the foods used in the analysis.

TABLE 2.5
PERCENTAGE OF YOUNG PEOPLE EATING FOODS HIGH IN SALT
USUALLY EVERY DAY

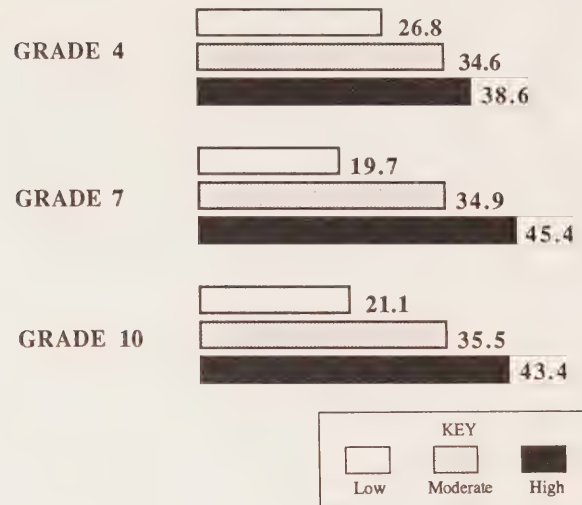
ITEM	GRADE 4	GRADE 7	GRADE 10
Cheese spreads or cheese slices	20.2	17.8	18.4
Hot dogs, sausages, bacon or lunch meats (e.g., salami, bologna)	34.1	33.1	27.4
Butter, margarine or salad dressing	48.9	61.1	66.7
Potato chips, corn chips, taco chips or pretzels	17.5	16.9	12.8
Ketchup, relish or pickles	20.2	18.2	16.7

The main source of daily salt for all grades was "butter, margarine or salad dressing" with "hot dogs, sausages, bacon or lunch meats" a distant second. Use of "butter, margarine or salad dressing" increased substantially from Grade 4 to Grade 10. In addition, over 60 per cent of the students in all grades indicated that they add salt to their food at least "some of the time;" moreover, 30.5 per cent of the Grade 10 students added salt to their food "most of the time."

We also classified the respondents in terms of their use of "high-salt" foods. Each respondent's total score on salt was based on a weekly measure of eating foods high in salt content and an equivalent weighting for the response to the "I add salt to my food" item. A score of 13 or less was considered "low" and 25 or more, "high." Figure 2.11 shows a greater percentage of students having a "high" consumption in all grades, and an increase in the proportion from Grade 4 to Grades 7 and 10.

FIGURE 2.11

PERCENTAGE OF YOUNG PEOPLE CLASSIFIED AS
LOW, MODERATE AND HIGH IN CONSUMPTION OF
FOODS HIGH IN SALT



6. Fats

Medical experts consider the blood cholesterol level of Canadians to be undesirably high because of high dietary intake of saturated fats and cholesterol. Nutritionists advise aiming for a fat intake to provide not more than 35 per cent of the calories used.

The food types classified in this study as "high in fat" are listed in Table 2.6. Our analysis shows that the food types "butter, margarine or salad dressing," "nuts and peanut butter," and "hot dogs, sausages, bacon or lunch meats" provide the main sources of fat in the diets of Grade 4 students. In the diets of Grades 7 and 10 students "butter, margarine or salad dressing" and "red meat" represented the main sources of fat. In addition, each grade had a substantial proportion of respondents (Grade 4 - 48.2%, Grade 7 - 44.7%, and Grade 10 - 40.3%) who indicated that they eat fried foods most days.

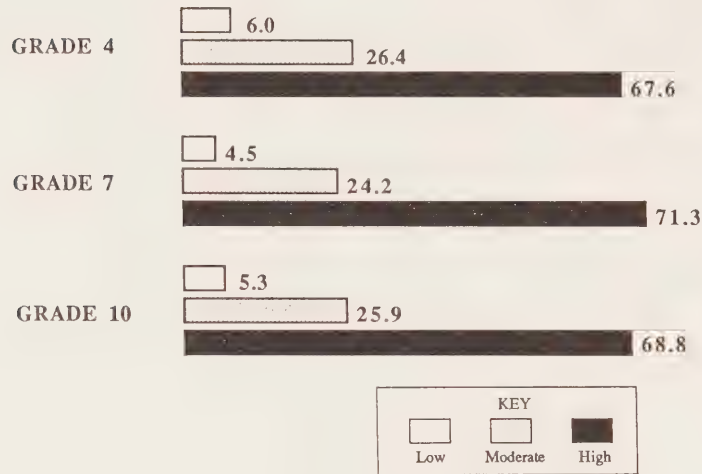
TABLE 2.6
PERCENTAGE OF YOUNG PEOPLE EATING/DRINKING FOODS HIGH IN FAT
USUALLY EVERY DAY

ITEM	GRADE 4	GRADE 7	GRADE 10
Cheese spreads or cheese slices	20.2	17.8	18.4
Other cheese (e.g., cheddar, mozzarella, cottage cheese)	16.1	14.6	13.3
Milk shakes, ice cream, pudding or chocolate milk	27.4	24.0	17.6
Red meat (e.g., beef, hamburger, pork, lamb)	32.0	43.7	49.2
Nuts or peanut butter	36.9	25.6	19.0
Hot dogs, sausages, bacon or lunch meats (e.g., salami, bologna)	34.1	33.1	27.4
Butter, margarine or salad dressing	48.9	61.1	66.7
Potato chips, corn-chips, taco chips or pretzels	17.5	16.9	12.8
Gravy	10.4	6.0	5.7
Doughnuts, cookies, pastry or cake	23.9	22.1	22.8

For the analysis of the overall use of "high-fat" foods, a respondent's diet was classified as high in fat if food sources "high in fat" were used the equivalent of at least 25 times per week (Low - 0 to 13 per week; Moderate - 14 to 24 per week). Included in the score was an estimated weekly measure based on the response to "I eat fried foods most days." As can be seen from Figure 2.12, fat consumption was generally high for all grades, with a peak at Grade 7 and a slight decline in Grade 10.

FIGURE 2.12

PERCENTAGE OF YOUNG PEOPLE CLASSIFIED AS
LOW, MODERATE AND HIGH IN CONSUMPTION OF
FOODS HIGH IN FAT



7. Fibre

Recently, the importance of fibre to a healthy diet has been widely recognized. Foods high in fibre are considered helpful in preventing a number of health problems, including hemorrhoids, diverticulitis and constipation. The food types classified as "high in fibre" are shown in Table 2.7. From our analysis of the use of these food types, we found "fruits" were the primary source of fibre in the diet for all grades followed by "nuts or peanut butter," "green vegetables" and "whole grain cereals" for Grade 4s, "green vegetables" and "nuts or peanut butter" for Grades 7 and 10. There is a similar use of "fruits," an increase in the use of "green vegetables" and a significant decline in the use of all other "high-fibre" food types from Grade 4 to 10.

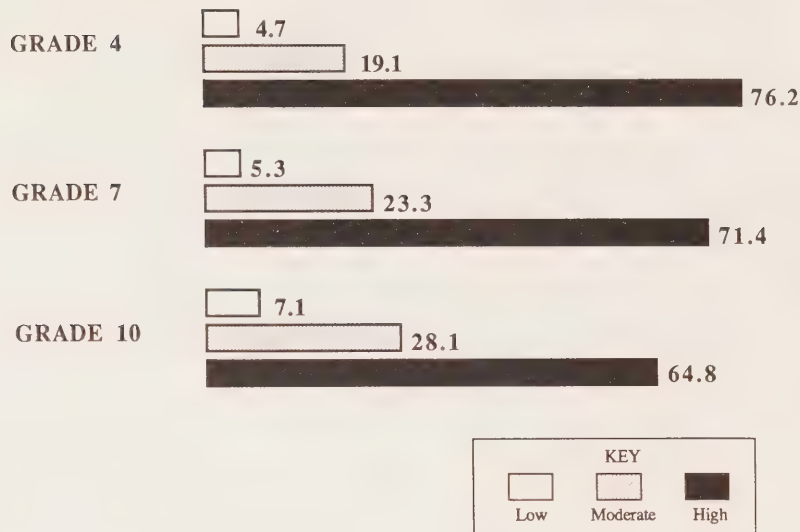
TABLE 2.7
PERCENTAGE OF YOUNG PEOPLE EATING FOODS HIGH IN FIBRE
USUALLY EVERY DAY

ITEM	GRADE 4	GRADE 7	GRADE 10
Nuts or peanut butter	36.9	25.6	19.0
Beans (e.g., pork and beans, chili)	7.6	3.0	1.3
Whole grain cereals (e.g., oatmeal porridge, Bran Flakes, granola, Shredded Wheat)	33.3	24.7	18.2
Whole grain breads (e.g., brown breads, brown muffins or rolls)	22.8	18.3	16.8
Fruits (e.g., orange, grapefruit, apple, banana, grapes)	67.3	61.5	57.9
Carrots, squash or sweet potato	20.9	18.7	14.5
Green vegetables (e.g., peas, green beans, lettuce, cabbage, broccoli)	31.4	37.8	38.0

Our analysis of the intake of "high-fibre" foods was based on less than one source a day being considered "low," one or two sources a day "moderate," and more than two sources a day "high." As can be seen from Figure 2.13, a very small proportion of the respondents reported diets low in fibre consumption. The proportions of Grades 4 and 7 students eating more than two sources of fibre is substantial, but the decline by Grade 10 should be noted because some nutritionists now suggest that at least three daily food sources high in fibre are necessary for a healthful diet.

FIGURE 2.13

PERCENTAGE OF YOUNG PEOPLE CLASSIFIED AS
LOW, MODERATE AND HIGH IN CONSUMPTION OF
FOODS HIGH IN FIBRE

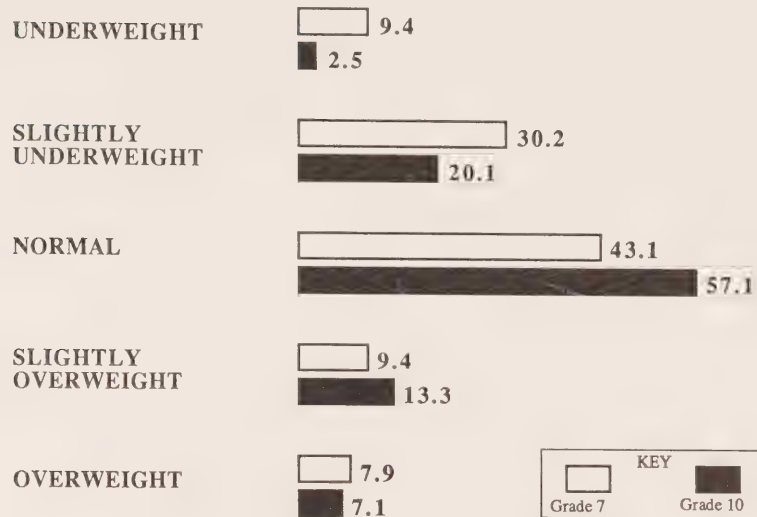


D. OVERWEIGHT/UNDERWEIGHT

Weight control is a problem for many Canadians and both overweight and underweight people increase their risks of certain health problems.

For this study, Grades 7 and 10 students were asked to estimate their height in feet and inches or in centimeters and their weight in pounds or kilograms (Grade 4 students were unable to do this accurately). Each student was then classified according to the Wetzel Grid for Evaluating Body Physique. Figure 2.14 presents the breakdown of the Grade 7 and 10 respondents according to this procedure.

FIGURE 2.14
PERCENTAGE OF YOUNG PEOPLE
IN GRADES 7 AND 10 CLASSIFIED BY
BODY TYPE



We anticipated that those on the overweight side of the Wetzel physique classification would be more likely to eat foods high in sugar and fat, as well as fried foods, than those classified as underweight. We also examined the relationship between body type and eating breakfast regularly. Virtually no differences were found on these factors among overweight and underweight Grade 10s, and only small differences were found among Grade 7s.

E. NUTRITION ATTITUDES AND BEHAVIOURS

It is a generally accepted principle that healthy attitudes lead to healthy behaviours. To investigate this, we related the attitude represented by the survey item, "I try to eat healthy foods," to specific dietary behaviours. The percentage of respondents who agreed with the attitude item and who met and did not meet the food group criteria is presented in Table 2.8.

TABLE 2.8

PERCENTAGE OF YOUNG PEOPLE AGREEING WITH "I TRY TO EAT HEALTHY FOODS" WHO MEET AND DO NOT MEET THE DAILY AND VARIETY CRITERIA FOR THE FOUR FOOD GROUPS

FOOD GROUPS	MEET FOUR FOOD GROUP CRITERIA					
	Grade 4		Grade 7		Grade 10	
	No	Yes	No	Yes	No	Yes
Four Food Groups	90.6	91.6	76.6	87.4	72.7	88.2
Milk and Milk Products	89.7	91.3	78.0	82.8	72.9	81.4
Meat, Fish, Poultry and Alternates	92.5	91.1	73.4	82.5	67.4	80.7
Breads and Cereals	91.4	91.1	74.0	84.2	70.2	83.7
Fruits and Vegetables	90.5	91.5	75.9	85.7	69.1	86.6

The results for Grade 4s show little relationship between the attitude and whether or not the students eat/drink appropriately from the four food groups. Almost as many youngsters, in this grade, who say they try to eat healthy foods have met the criteria as those who say they do not try to eat healthy foods. However, in Grades 7 and 10, there were clear differences between the two groups, thus indicating an association between the nutrition attitude and dietary behaviours. In both grades, a significantly higher percentage of young people who try to eat healthy foods are shown to eat appropriately.

F. GENDER DIFFERENCES

There were significant differences in dietary behaviour between males and females. Generally speaking, the foods that females eat or drink more often than males tend to be lower in sugar and fat content. For example, Grades 4 and 7 girls were more likely to eat green vegetables, potatoes and cheese. On the other hand, most of the foods used more by males than females tend to be higher in sugar and fat; for example, "soft drinks," "honey,

jam, syrup," "gravy," and "candy." Table 2.9 presents the percentage differences for those food types selected more often by males than females.

TABLE 2.9
FOOD TYPES FOR WHICH THERE ARE MORE YOUNG MALES THAN FEMALES
EATING/DRINKING AT LEAST 2 OR 3 TIMES A WEEK, BY PERCENTAGE DIFFERENCE*

FOOD TYPES	GRADE 10	GRADE 7	GRADE 4
Soft Drinks	17.2	13.0	8.8
Honey, jam, syrup	15.6	12.4	--
Hot dogs, sausage, bacon, lunch meats	14.7	6.1	--
Doughnuts, pie, cookies, cake	14.6	5.8	--
Cereals (not whole grain)	14.3	8.1	--
Milk shakes, ice cream, pudding, chocolate milk	13.3	5.2	--
Nuts, peanut butter	12.6	9.2	--
Eggs	11.7	--	--
Ketchup, relish or pickles	11.3	7.7	5.3
Whole grain cereals	10.5	6.5	--
Fruit drinks	7.9	--	--
Potato chips, other chips, pretzels	7.3	5.1	8.1
Cheese spreads	7.2	--	--
Gravy	7.0	--	--
Candy	6.9	--	6.7

*Only statistically significant differences are noted.

The pattern of males eating/drinking more "high fat" and "high sugar" foods than females is more pronounced as teenagers become more independent in their food selection. Females were more likely than males to skip breakfast; 12.4 per cent of Grade 7 females compared to 8.9 per cent Grade 7 males answered "rarely" to the "I eat breakfast" item. The differences were much greater in Grade 10 where 25.4 per cent of the females compared to 14.3 per cent of the males answered "rarely" to "I eat breakfast."

G. PROVINCIAL DIFFERENCES

The percentages of students in the ten provinces meeting the "daily" and "variety" criteria for the four food groups were quite similar, ranging from 40.3 per cent to 55.5 per cent in Grade 4; 39.3 per cent to 57.1 in Grade 7, and 36.1 per cent to 55.4 per cent by Grade 10.

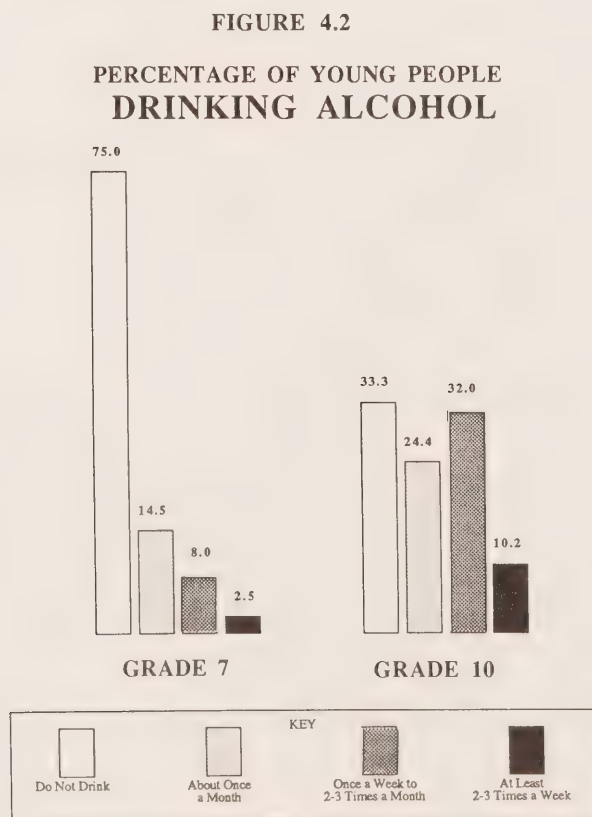
Some provincial differences were evident in the proportion of respondents classified as high on sugar, salt, fat and fibre consumption. The province that had the lowest proportion meeting the four food groups criteria tended to have more high scorers on the measures of sugar, salt and fat consumption, more low scorers on fibre, and was characterized by a low proportion of students eating vegetables daily.

Figure 4.1). However, most of those smoked fewer than ten cigarettes a day. Far more cigarette smokers were found in Grade 10 (26.3%). To the item "I will probably smoke in the future," 5.6 per cent of the Grade 4s, 13.9 per cent of the Grade 7s and 23.2 per cent of the Grade 10s indicated that they agreed. The percentages for Grade 7s and 10s are quite similar to those reporting that they now use tobacco.

C. ALCOHOL USE

While a broad acceptance of moderate alcohol use is prevalent in Canadian society, there is great concern about the dangers of its misuse. There is fundamental concern not only about alcohol use and driving, but also about the long-term physiological and social effects of alcohol misuse.

Figure 4.2 indicates the extent of alcohol use by Grades 7 and 10 students.



By the age of 12, one-quarter had drunk alcohol. Since well over half of this group drank alcohol only about once a month, much of the drinking at this age may be experimental or take place on special family occasions. By Grade 10, the pattern is quite different; two-thirds were drinking alcohol, and the frequency of use had increased considerably. Almost a quarter of the Grade 10s were drinking alcohol about once a month, but almost a third were drinking alcoholic beverages once a week to two to three times a month, and another 10.2 per cent were using alcohol at least two to three times a week.

The same pattern holds true for the number of drinks consumed at one time. Of the Grade 7 drinkers, 78 per cent drank only one to two drinks at any one time, whereas of the Grade 10s, this percentage decreased to 43 per cent. More importantly, 27 per cent of the Grade 10 drinkers were consuming three to four drinks at a time, and 30 per cent reported they had five or more drinks at one time.

Of the Grade 7 students, 29.5 per cent stated that they expected to drink in the future compared with 65.1 per cent of the Grade 10s.

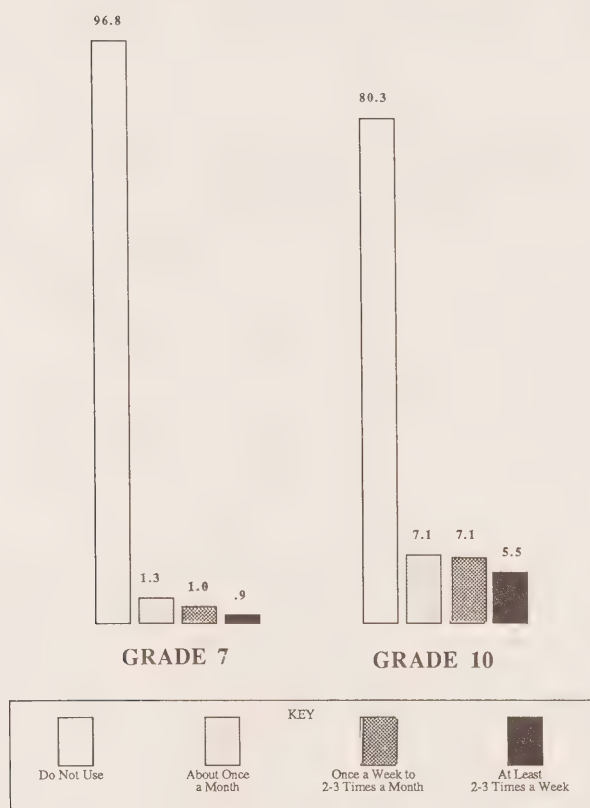
D. CANNABIS USE

Although information was obtained on the use of glue/solvents and other drugs (e.g., "speed" or tranquillizers), we present only the data on cannabis because the number using other drugs was quite low. The use of cannabis (marijuana or hashish) in Canada is a criminal offence, and yet by Grade 10 approximately one-fifth of the students have tried cannabis (see Figure 4.3). The incidence of use at Grade 7 was quite low (3.2%). Not

only were more Grade 10s than Grade 7s using cannabis, but also the Grade 10 users were inclined to use it more often. Of the Grade 7 respondents, 5.2 per cent indicated that they expected to use cannabis in the future compared with 17.5 per cent of those in Grade 10.

FIGURE 4.3

PERCENTAGE OF YOUNG PEOPLE
USING CANNABIS



E. ATTITUDES TOWARD USE OF ALCOHOL, DRUGS AND TOBACCO

In this analysis we examined alcohol, cannabis and cigarette use in relationship to attitudes to the law and to basic values.

From Table 4.1, it can be seen that nearly two-thirds of the Grade 7 students agreed that people should not drink alcohol under the legal age limit, but only about one-third of the Grade 10s agreed with this statement. It is interesting to note that the percentages of young people who agreed nearly parallel those at each grade who do not drink alcohol (75% - Grade 7 and 33.3% - Grade 10). Nearly one-third of Grade 10s felt that the drinking age should be lowered. It is also of interest that more Grade 7s than Grade 10s believed that marijuana should be legalized.

TABLE 4.1
PERCENTAGE OF YOUNG PEOPLE AGREEING WITH ATTITUDES TOWARD THE LEGAL ASPECTS
OF ALCOHOL AND CANNABIS USE

ITEM	GRADE 7	GRADE 10
Young people under the legal age limit should not drink alcohol.	64.5	34.0
The legal drinking age should be lowered.	--	30.8
Marijuana should be legalized.	23.1	18.3

Table 4.2 shows that although the majority in both Grades 7 and 10 agreed that smokers should ask permission before smoking, there was less support for the position that people should not smoke in public places. Over one-half of the students in both grades would help a family member stop smoking, and nearly three-quarters would help a friend. A very high proportion of the Grade 10s realized the danger of drinking and driving and would try to stop from driving a friend who had been drinking too much. Less than one-fifth of both Grade 7s and 10s agreed with the statement, "There is no harm in the occasional use of marijuana." Finally, one-quarter of the Grade 10s believed that alcohol is needed to "loosen up" the atmosphere at a party.

TABLE 4.2
PERCENTAGE OF YOUNG PEOPLE AGREEING WITH ITEMS ABOUT
ALCOHOL, CANNABIS AND TOBACCO USE

ITEM	GRADE 7	GRADE 10
When with others, smokers should ask permission before lighting a cigarette.	63.2	60.1
People should not be allowed to smoke in public places.	44.7	32.5
If someone in my family smoked, I would try to get him or her to stop.	60.9	50.6
I would try to help a friend quit smoking.	72.1	72.9
I would try to stop a friend from driving if I thought he or she had too much alcohol.	--	91.2
There is no harm in the occasional use of marijuana.	13.4	19.6
Serving alcohol is the best way to loosen up the atmosphere at a party.	--	25.0

F. GENDER DIFFERENCES IN ALCOHOL, DRUG AND TOBACCO USE

A number of years ago, gender differences in the use of alcohol, drugs and tobacco were quite pronounced. However, in the last few years, these differences have become smaller, and in some instances there has been a reversal in the pattern of higher usage by males. With regard to alcohol use at Grade 7, more males than females had used it (30.4% to 19.7%), but by Grade 10, there were no real gender differences in the proportion of drinkers. However, there were more Grade 10 males in the category of "5 or more drinks" consumed at one time.

It is with tobacco use that a trend to reversal becomes evident. More Grade 10 females than males reported using tobacco. Grade 10 males reported using cannabis slightly more often than did females.

G. RELATIONSHIPS BETWEEN ALCOHOL, CANNABIS, AND TOBACCO USE AND OTHER HEALTH-RELATED FACTORS

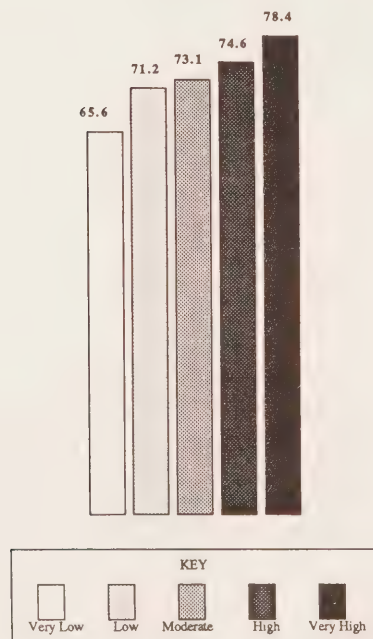
In this section, we shed a little more light on the characteristics of alcohol, cannabis and tobacco users. One purpose of this analysis was to determine whether the use of one of these substances was related to the use of either or both of the others. A second purpose was to determine whether the use of these substances is generally associated with other behaviours and attitudes that denote a risk to health.

1. Physical Activity Level and Alcohol, Cannabis and Tobacco Use

Figure 4.4 illustrates that the most physically active in Grade 10 are less likely to smoke. (The number of smokers in Grade 7 was too small for meaningful analysis.)

FIGURE 4.4

PHYSICAL ACTIVITY LEVEL AND PERCENTAGE OF YOUNG PEOPLE WHO DO NOT SMOKE CIGARETTES GRADE 10



No statistically significant relationship was found between physical activity level and alcohol or cannabis use.

2. Alcohol, Cannabis and Tobacco Use, and Health-related Attitudes and Behaviours

Tables 4.3 and 4.4 present the relationship between alcohol, cannabis and cigarette use for Grades 7 and 10 students, and selected items from the surveys. The tables must be read carefully because the information is reported using a variety of response alternatives. Overall there was a clear, common pattern of risk-taking attitudes and behaviours. As expected, Grade 7 users of alcohol, cannabis and cigarettes were far more likely than non-users to have positive attitudes toward these substances (items 25 to 29), to associate with users (items 23 & 24), and to be more protective of users (items 30 & 31); and they were also more likely to use the substances in the future (items 20 to 22). Other differences must be noted by health educators. The alcohol, marijuana and cigarette users were much more likely than non-users to:

- spend more time listening to music and less time doing homework and studying (items 1 & 2);

- have negative attitudes toward parents and home life (items 3, 4, 5, 6, 7, 8);

- have lower self-esteem and poorer mental health (items 9, 10, 11, 12);

- be willing to take risks (items 17 & 18); and,

- have a negative attitude toward school (item 19).

In addition, a slight (but in most cases not statistically significant) relationship was evident between substance use and attitudes about peer pressure: users feel peer pressure to use alcohol, cannabis and cigarettes as well as "do wrong things" (items 13, 14, 15, 16).

Generally, the relationship is not as strong between certain attitudes and behaviours and alcohol use as it is for the use of cigarettes and cannabis.

TABLE 4.3
RELATIONSHIP OF DRUG USE TO ATTITUDE AND BEHAVIOUR ITEMS - GRADE 7 PERCENTAGES

ITEM	ALCOHOL		CANNABIS		CIGARETTES	
	Non-Users	Users	Non-Users	Users	Non-Users	Users
1. Time spent listening to music. (20+ hrs.)	16.1	27.0	18.1	36.2	17.5	28.7
2. Time spent doing homework and studying. (0-1 hr.)	8.1	11.3	8.7	14.5	8.0	16.1
3. My parents understand me. (most of the time)	58.6	46.9	56.6	30.1	57.6	38.7
4. My parents expect too much of me. (most/time)	9.8	17.7	11.1	30.9	10.5	22.5
5. I would like to leave home. (most/time)	6.1	14.3	7.3	33.7	6.5	21.8
6. I have arguments with my parents. (most/time)	9.0	19.4	10.6	40.4	9.6	27.8
7. I have a happy home life. (disagree)	4.5	10.3	5.3	25.3	4.7	16.0
8. My parents trust me. (disagree)	5.7	13.2	7.0	23.4	6.3	17.7
9. I get headaches. (most of the time)	11.9	16.3	12.6	24.9	12.0	20.7
10. I feel depressed. (most of the time)	5.4	7.4	5.6	13.8	5.3	10.8
11. I wish I were someone else. (most/time)	9.7	13.5	10.3	18.5	9.9	16.4
12. I have confidence in myself. (most/time)	54.7	51.6	54.3	42.1	55.3	42.1
13. Friends pressure me to smoke cigarettes. (most of the time)	4.7	5.7	4.8	9.4	4.5	9.0
14. Friends pressure me to drink alcohol. (most of the time)	3.6	4.6	3.8	8.2	3.6	6.2
15. Friends encourage me to do wrong things. (most of the time)	4.2	8.1	4.8	14.4	4.5	10.3
16. Friends pressure me to use marijuana. (most of the time)	3.1	4.3	3.2	10.1	3.0	6.7
17. I wear a seat belt in a car or truck. (rarely)	19.2	33.0	21.8	49.0	20.7	38.3
18. Hitchhiking is dangerous. (disagree)	7.2	15.0	8.6	24.3	7.8	20.9

cont'd.

TABLE 4.3 (cont'd.)

RELATIONSHIP OF DRUG USE TO ATTITUDE AND BEHAVIOUR ITEMS - GRADE 7 PERCENTAGES

ITEM	ALCOHOL		CANNABIS		CIGARETTES	
	Non-Users	Users	Non-Users	Users	Non-Users	Users
19. I am happy at school. (disagree)	13.2	27.1	15.9	40.8	14.3	36.8
20. I will probably drink alcohol in the future. (agree)	18.8	61.7	28.1	72.5	25.7	59.3
21. I will probably use marijuana in the future. (agree)	2.3	14.2	3.5	56.8	2.8	25.1
22. I will probably smoke in the future. (agree)	8.5	30.3	12.3	60.5	6.8	71.7
23. Many of my friends drink alcohol. (agree)	7.6	37.3	13.2	69.3	10.8	48.6
24. Many of my friends have tried drugs. (agree)	9.1	30.7	12.4	75.2	10.0	49.7
25. There is no harm in the occasional use of marijuana. (agree)	11.7	19.0	12.5	43.8	11.8	26.8
26. Minors should not drink alcohol. (disagree)	15.7	37.7	20.2	50.9	18.8	40.7
27. Marijuana should be legalized. (agree)	22.1	26.4	22.5	44.5	21.7	34.3
28. Smokers should get consent in company of non-smokers. (disagree)	12.9	26.7	15.4	42.8	13.6	37.9
29. Smoking in public places should be banned. (disagree)	25.3	41.1	28.4	56.4	26.2	54.8
30. I would try to help a friend quit smoking. (disagree)	8.7	18.6	10.2	40.4	8.4	34.7
31. I would urge family members to stop smoking. (disagree)	14.9	28.9	17.6	44.3	14.8	48.2

As can be seen from Table 4.4, there were many similar differences between alcohol, cannabis and cigarette users and non-users in Grades 7 and 10.

Grade 10 users were more likely to:

- spend more time listening to music and less time doing homework and studying (items 1 & 2);

- have negative attitudes toward parents and home life (items 3, 4, 5, 6, 7, 8);

- be willing to take risks (items 17 & 18);

- have negative attitudes to school (item 19); and

- have friends who use alcohol and drugs (items 23, 24).

As expected, users were far more likely than non-users to have positive attitudes toward alcohol, cannabis and cigarette use (items 29, 33 & 34), including future use (items 20 to 22), to associate with users (items 23 & 24), and to be more protective of users (items 31 & 32). Also, differences were large between non-users and users and attitudes toward the drug and alcohol laws (items 25 to 28, and 30). Differences between users and non-users were not significant for items related to mental health (items 9 & 10), peer pressure (items 13 to 16) and self-esteem (items 11 & 12).

TABLE 4.4
RELATIONSHIP OF DRUG USE TO ATTITUDE AND BEHAVIOUR ITEMS - GRADE 10 PERCENTAGES

ITEM	ALCOHOL		CANNABIS		CIGARETTES	
	Non-Users	Users	Non-Users	Users	Non-Users	Users
1. Time spent listening to music. (20+ hrs.)	19.4	30.9	24.5	38.2	23.9	36.3
2. Time spent doing homework and studying. (0-1 hr.)	5.2	11.9	6.6	21.9	6.5	18.4
3. My parents understand me. (most of the time)	52.6	41.7	48.4	32.8	49.5	33.7
4. My parents expect too much of me. (most of the time)	10.1	14.6	11.3	20.2	10.5	20.1
5. I would like to leave home. (most/time)	6.3	14.6	8.3	26.3	7.7	23.5
6. I have arguments with my parents. (most of the time)	9.2	18.9	12.5	28.9	11.8	26.5
7. I have a happy home life. (disagree)	6.5	13.5	8.5	22.5	7.9	20.4
8. My parents trust me. (disagree)	8.4	16.1	10.4	26.1	9.7	24.3
9. I get headaches. (most of the time)	9.1	12.3	10.7	13.6	9.6	15.7
10. I feel depressed. (most of the time)	5.8	7.8	6.1	11.3	5.6	11.3
11. I wish I were someone else. (most of the time)	7.3	6.9	6.6	8.8	6.5	8.6
12. I have confidence in myself. (most of the time)	53.4	51.6	52.2	51.6	53.9	47.3
13. Friends pressure me to smoke cigarettes. (most of the time)	1.6	1.8	1.7	1.9	1.5	2.4
14. Friends pressure me to drink alcohol. (most of the time)	3.4	3.4	3.5	3.2	3.6	2.9
15. Friends encourage me to do wrong things. (most of the time)	2.3	3.3	2.5	5.0	2.6	3.8
16. Friends pressure me to use marijuana. (most of the time)	1.7	2.0	1.4	3.9	1.6	2.8
17. I wear a seat belt in a car or truck. (rarely)	19.9	29.5	23.5	38.1	23.6	33.8

cont'd.

TABLE 4.4 (cont'd.)

RELATIONSHIP OF DRUG USE TO ATTITUDE AND BEHAVIOUR ITEMS - GRADE 10 PERCENTAGES

ITEM	ALCOHOL		CANNABIS		CIGARETTES	
	Non-Users	Users	Non-Users	Users	Non-Users	Users
18. Hitchhiking is dangerous. (disagree)	14.1	21.8	16.9	29.0	16.9	26.0
19. I am happy at school. (disagree)	11.5	22.3	14.2	36.9	14.0	31.7
20. I will probably drink alcohol in the future. (agree)	31.6	81.8	59.7	86.6	59.9	79.7
21. I will probably use marijuana in future. (agree)	3.7	24.5	5.6	66.0	9.5	39.9
22. I will probably smoke in future. (agree)	8.1	30.7	15.5	54.4	5.6	72.8
23. Many friends drink alcohol. (agree)	35.5	79.5	58.4	90.7	57.5	85.1
24. Many friends have tried drugs. (agree)	26.5	59.7	38.6	89.3	37.9	78.5
25. There is no harm in the occasional use of marijuana. (agree)	3.9	27.6	7.5	69.3	11.0	43.9
26. Minors should not drink alcohol. (disagree)	20.4	60.1	40.6	72.9	40.3	65.6
27. Marijuana should be legalized. (agree)	8.1	23.4	9.1	55.9	11.5	37.7
28. The legal drinking age should be lowered. (agree)	9.9	41.3	24.0	58.6	23.8	50.7
29. Smokers should get consent if in the company of non-smokers. (disagree)	14.5	28.5	20.2	38.5	18.4	39.2
30. Smoking in public places should be banned. (disagree)	33.4	53.1	41.7	66.0	36.7	74.0
31. I would try to help a friend quit smoking. (disagree)	7.6	12.5	9.5	16.5	8.5	17.4
32. I would urge family members to stop smoking. (disagree)	17.3	35.0	24.0	50.2	20.6	52.9
33. Alcohol is best way to loosen up party atmosphere. (agree)	7.0	34.0	18.7	50.9	19.2	41.5
34. I would drive in a car with a person who has been drinking alcohol. (agree)	5.6	16.6	9.7	25.9	10.4	19.8

In summary, it would appear that in both Grade 7 and 10 young people who use alcohol, cannabis and cigarettes are more inclined to have health attitudes and behaviours that could adversely affect their physical and mental health.

3. Relationship of Alcohol Use to Marijuana and Tobacco Use

The findings indicate that those who drink alcohol are also more likely to use marijuana and cigarettes (see Table 4.5). Also, the higher the frequency of use and the greater the amount of alcohol drunk at one time, the greater the use of marijuana and tobacco.

TABLE 4.5
RELATIONSHIP OF USERS OF ALCOHOL TO USERS OF MARIJUANA
AND TOBACCO, BY PERCENTAGE OF YOUNG PEOPLE

	ALCOHOL			
	Grade 7		Grade 10	
	Non- Users	Users	Non- Users	Users
Marijuana Users	.6	11.3	2.1	28.4
Cigarette Users	4.8	29.6	7.0	35.9

H. PROVINCIAL DIFFERENCES

There were significant differences in the proportion of young people in Grade 10 who smoked from province to province with a high of 36.3 per cent in one province and a low of 19.9 per cent in another. The province with the highest proportion of Grade 10 smokers also had the highest proportion of Grade 7 smokers. The proportion of Grade 10s who used alcohol ranged from a high of 71.5 per cent in one province to a low of 55.1 per cent in another. Grade 7 alcohol users ranged from a high of 20.9 per cent in one province to a low of 13.3 per cent in another. The proportion of Grade 7 users of cannabis was about the same from province to province. By Grade 10, the percentages ranged from 22.2 per cent to 10.8 per cent.

CHAPTER V

DENTAL HEALTH

A. INTRODUCTION

The prevalence of dental disease among both youth and adults is an important reminder of the need for effective dental health education that promotes prevention. Studies on 13- and 14-year-old Canadians show they average four to nine cavities in permanent teeth depending on the province. Gingivitis (gum inflammation) is found in an estimated 80 to 95 per cent of 13- to 14-year-old children, and surveys suggest that a significant proportion of children suffer from a variety of orthodontic problems.

There was little difficulty in finding consensus among dental experts that teeth should be brushed at least twice a day; consequently, this became our basic criterion for teeth brushing. However, in the case of flossing, there was less agreement. After the pilot study results were examined and some discussion ensued with our dental advisors, we settled for twice a week as the minimum requirement for flossing. Certainly, visiting the dentist at least once a year is a minimum for prevention. All items considered, our measures of positive dental behaviour (i.e., brushing twice a day, flossing twice a week, seeing a dentist once a year) are conservative.

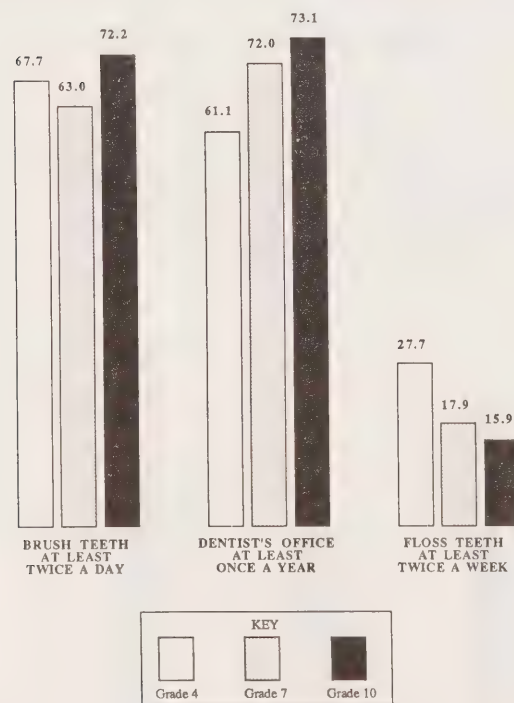
B. DENTAL HEALTH ATTITUDES AND BEHAVIOURS

From Figure 5.1 it can be seen that two-thirds of Grade 4 students brushed their teeth at least twice a day. This decreases to 63 per cent among Grade 7s, and then, surprisingly, increases to 72.2 per cent among Grade 10s.

There is a gradual increase from Grade 4 to 10 in the percentage of young people who visited the dentist at least once a year. The small proportions of young people who flossed and the downward trend from Grade 4 (27.7%) to Grade 10 (15.9%) is not heartening.

The dental behaviour items correlated well with each other; that is, those who brushed their teeth regularly were also inclined to floss at least twice a week and visit a dentist regularly.

FIGURE 5.1
PERCENTAGE OF YOUNG PEOPLE RESPONDING
"MOST OF THE TIME" TO
DENTAL BEHAVIOUR ITEMS



A strong relationship was found between Grade 4 students' attitude to "I try to take care of my teeth" and whether they brushed their teeth twice

daily "most of the time." Only 30.1 per cent of those who indicated "rarely" to "I try to take care of my teeth," brushed their teeth twice a day, compared to 76.9 per cent who indicated "most of the time." Similar, but higher differences, were found at Grade 7 (8.1% compared to 79.6%) and Grade 10 (23.6% to 84.6%).

There was a similar relationship found between the attitude of taking care of one's teeth and visiting the dentist at least once a year, but regular flossing was not related to the attitude.

As with most health behaviours, males tend to take more chances with their dental health than females (see Figure 5.2). The differences for teeth brushing were not great at Grade 4 where dental behaviour is often

FIGURE 5.2
PERCENTAGE OF YOUNG PEOPLE WHO
BRUSH THEIR TEETH
AT LEAST TWICE A DAY
"MOST OF THE TIME"



controlled by parents; however, the gender differences were 17 per cent in Grade 7, and 25 per cent in Grade 10 where brushing teeth is mainly an independent decision.

Gender differences were similar but somewhat smaller than the above for "going to the dentist at least once a year," and "flossing at least twice a week."

C. DENTAL HEALTH AND OTHER HEALTH-RELATED FACTORS

This study provided an excellent opportunity to study the relationship between dental health behaviour and other health-related attitudes and behaviours. A scale based on the three dental behaviour items reported in Figure 5.1 was developed, and the students at each grade level were divided into three groups based on their scores on this scale ("low," "moderate," and "high"). A high score indicates positive dental behaviour and a low score, negative. Table 5.1 summarizes the more significant relationships that resulted from the three dental behaviour groupings cross-tabulated with safety and nutrition items. In the case of nutrition, positive dietary attitudes and behaviours were related to positive dental behaviour. For example, of those Grade 7 students in the top third of the dental health scale, only 13.2 per cent answered "most of the time" to preferring "candy and chips to a fruit/vegetable snack," compared to 31.4 per cent in the bottom third. A similar pattern occurred with the safety items (items 5 and 6).

TABLE 5.1
RELATIONSHIP BETWEEN SCORES ON THE DENTAL HEALTH SCALE
AND HEALTH ATTITUDES AND BEHAVIOURS,
BY PERCENTAGE OF YOUNG PEOPLE

ITEM	Grade 4			DENTAL HEALTH SCORE Grade 7			Grade 10		
	Low	Mod.	High	Low	Mod.	High	Low	Mod.	High
1. Candy (at least 2-3 times/week)	49.8	44.0	40.7	59.3	51.1	45.6	45.9	45.1	38.8
2. Soft Drinks (at least 2-3 times/week)	46.3	42.0	40.2	58.4	52.6	48.9	62.6	57.4	47.2
3. I prefer candy or chips to fruit/vegetable snack (most of the time)	25.8	22.4	16.2	31.4	20.3	13.2	28.4	23.5	14.5
4. I try to eat heathly foods (agree)	90.3	91.4	91.6	69.0	84.8	90.9	70.1	80.3	88.4
5. I follow safety rules in the pool, rink, and gym (most of the time)	77.3	82.0	89.2	59.6	71.9	79.4	55.8	61.9	73.9
6. I wear a seat belt when driving in a car or truck (most of the time)	49.7	65.5	77.4	37.6	50.5	63.5	37.9	46.4	58.2

D. PROVINCIAL DIFFERENCES

There were surprising differences from province to province in the proportion of students brushing their teeth twice a day (for Grade 4s, there was a difference of 15% from highest to lowest province; that is, 57.3% to 72.2%; for Grade 7s and 10s the difference was 20%; that is, 46.6% to 66.7%, and 57.7% to 77.3%). Significant variation was also found from province to province in the proportion of students who go to the dentist once a year (Grade 4s - 50.7% to 70.2%; Grade 7s - 60.5% to 85.1%; and Grade 10s -

59% to 81.3%). The proportion of students who flossed their teeth at least twice a week was typically less than 20 per cent in Grades 7 and 10, and there were no significant differences from province to province. More Grade 4s than Grade 7s and 10s flossed their teeth at least twice a week, with some variation from province to province (23.4% to 33.1%).

CHAPTER VI

SAFETY

A. INTRODUCTION

Accidents are the number-one cause of injury and death among young people. The internalization of positive attitudes to safety and appropriate behaviours is important not only to prevent accidents among youth, but to establish lifetime habits. Canada's schools have not lost sight of the need for safety education, and most school systems have provided courses in safety for children from Kindergarten to Grade 6.

B. SAFETY ATTITUDES AND BEHAVIOURS

Table 6.1 presents the findings of the safety attitude and behaviour items analyzed by gender. Items 1, 2 and 3 focussed on pedestrians' safety and were mainly directed to Grade 4 students. Approximately 20 per cent of these young people reported that "most of the time" they do not look both ways when crossing the street, and nearly half "most of the time" do not cross at street corners. What is surprising is the large proportion (50% to 60% approximately) at all grades who would not walk on the safe side of the road when there are no sidewalks.

The bicycle safety items were directed to Grades 4 and 7 students.

Comparison of the two grades' results shows an increase from Grades 4 to 7 in the willingness to take risks. Twenty-five per cent more Grade 4s than Grade 7s would not ride double on a bike. Similar results were obtained for "I would ride a bike carefully," where there were 20 per cent more Grade 4s than Grade 7s who said "most of the time."

TABLE 6.1
PERCENTAGE OF YOUNG PEOPLE RESPONDING TO SAFETY ITEMS

ITEM	GRADE 4			GRADE 7			GRADE 10		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1. I look both ways before crossing the street. (most of the time)	73.9	87.6	80.8	--	--	--	--	--	--
2. If there were no sidewalks, I would walk on side of the road facing oncoming cars. (most of the time)	45.9	57.0	51.4	39.5	38.7	39.1	35.6	44.2	40.0
3. I cross the street at corners. (most of the time)	47.4	59.1	53.3	--	--	--	--	--	--
4. I would ride a bike in single file. (most of the time)	44.3	60.5	52.3	--	--	--	--	--	--
5. I would ride a bike carefully. (most of the time)	69.3	89.8	79.6	48.2	70.7	59.4	--	--	--
6. I would ride double on a bike. (disagree)	82.4	81.6	82.0	49.7	64.5	57.1	--	--	--
7. I would accept a ride from someone I do not know very well. (disagree)	87.8	86.9	87.3	82.2	88.9	85.5	--	--	--
8. Hitchhiking is dangerous. (agree)	79.5	79.0	79.2	77.4	85.6	81.5	59.9	76.3	68.3
9. I follow safety rules in the pool, rink and gym. (most of the time)	78.3	86.7	82.5	66.3	75.5	70.9	58.2	69.9	64.2
10. I would tell a friend when he or she is doing something unsafe. (agree)	85.4	86.1	85.8	76.9	82.7	79.8	--	--	--
11. I wear a seat belt when driving in a car or truck. (most of the time)	58.9	68.3	63.6	48.2	54.0	51.0	45.3	50.4	47.9
12. I would drive in a car with a person who has been drinking alcohol. (disagree)	--	--	--	--	--	--	63.0	70.0	66.6

Student responses to the questions about taking a ride from strangers and hitchhiking indicate that most were aware of the dangers of riding with people unknown to them. Approximately 86 per cent at both grades would not accept a ride with a stranger, and almost 80 per cent agreed that hitchhiking is dangerous.

The majority of youths follow safety rules and would tell a person when they are doing something unsafe, but the proportions decrease from Grade 4 to Grade 10. Risk-taking behaviour seems to go hand-in-hand with attainment of independence.

Unfortunately, there was also a decrease in the proportion of young people who wear seat belts "most of the time" from Grade 4 to Grade 10. Also, one-third of the Grade 10s would drive in a car with a person who has been drinking alcohol.

As with most health-related behaviours, it is the boys who are more inclined to take risks with their health. A number of items had statistically significant gender differences.

More girls said:

I would ride a bicycle carefully. (Grades 4 and 7)

Hitchhiking is dangerous. (Grades 7 and 10)

I would ride a bicycle in single file. (Grade 4)

I follow safety rules in the pool, rink and gym. (Grades 4, 7 and 10)

I look both ways before crossing the street. (Grade 4)

I cross the street at corners. (Grade 4)

If there were no sidewalks, I would walk on the side facing traffic.
(Grades 4 and 10)

I wear a seat belt when driving in a car or truck. (Grades 4 and 7)

More boys said:

I would ride double on a bicycle. (Grade 7)

I would accept a ride from someone I do not know very well. (Grade 7)

C. SAFETY AND OTHER HEALTH-RELATED ATTITUDES AND BEHAVIOURS

A safety scale was developed for Grades 4 and 7 based on responses to the items listed in Table 6.1. The students were divided into three equal groups ("high," "moderate" and "low") on the basis of their scores on this scale. The higher the score they received, the more safety conscious they were.

Table 6.2 presents the responses of the low, moderate and high scorers on the safety scale to other health items. In most grades, a strong relationship can be observed between student scores on the safety scale and their responses to items on: parent/child relationships (items 1-3), drugs (items 7-10) and happiness (items 11 & 12). For example, 58.2 per cent of Grade 7 students in the low safety category felt their parents trust them compared with 79.5 per cent in the high category. Those scoring in the high third on the safety scale were far more likely than those scoring in the low third to have healthy attitudes and display healthy behaviours. For example, the most safety conscious of the Grade 7s were far less likely to be cigarette smokers than the least safety conscious (19.8 % to 4%).

TABLE 6.2

RELATIONSHIP OF SAFETY ATTITUDES AND BEHAVIOURS TO OTHER HEALTH ITEMS,
BY PERCENTAGE OF YOUNG PEOPLE

ITEM	SAFETY ATTITUDES AND BEHAVIOURS								
	Grade 4			Grade 7			Grade 10		
	Low	Mod.	High	Low	Mod.	High	Low	Mod.	High
1. My parents trust me. (agree)	69.6	73.3	76.7	58.2	73.4	79.5	61.7	72.4	76.6
2. My parents understand me. (most of the time)	56.3	68.1	75.9	45.4	58.9	64.8	36.4	47.2	51.4
3. My parents expect too much of me. (most of the time)	18.4	16.5	16.9	15.7	10.2	8.6	16.4	11.1	11.5
4. Friends encourage me to do things I know are dangerous. (most of the time)	14.1	12.5	11.1	--	--	--	--	--	--
5. Friends encourage me to do things I know are wrong. (most of the time)	--	--	--	7.4	4.6	3.2	5.3	2.2	1.4
6. I have confidence in myself. (most of the time)	52.9	59.7	65.4	46.4	54.2	61.5	49.5	52.9	53.8
7. Alcohol use. (at least once a week)	--	--	--	11.2	3.4	1.8	42.6	21.2	13.0
8. Cigarette use. (users)	--	--	--	19.8	7.7	4.0	37.1	23.8	18.4
9. The legal drinking age should be lowered. (agree)	--	--	--	--	--	--	49.0	27.2	18.1
10. Alcohol is the best way to loosen-up party atmosphere. (agree)	--	--	--	--	--	--	40.3	23.8	12.6
11. I am happy at school. (agree)	--	--	--	45.7	66.2	74.6	49.7	67.0	73.2
12. I have a happy home life. (agree)	80.4	85.4	89.5	72.3	84.3	88.6	70.9	80.2	82.7

D. PROVINCIAL DIFFERENCES

There were small differences on most safety items from province to province, but there were dramatic differences on the matter of wearing seat belts. Provincial government regulations must play an important part in determining seat-belt wearing because there was a low of 12.4 per cent of

Grade 10s who wore their seat belts "most of the time" in one province, contrasted to a high of 71.4 per cent in another. The range of Grade 7s wearing them extended from 18 per cent to 71.9 percent, and of Grade 4s, 35.1 per cent to 79.6 percent.

CHAPTER VII

SELF AND OTHERS

A. INTRODUCTION

Although the main thrust of this research has been directed toward the physical health of young Canadians, there are at least as many general health concerns that arise from social and emotional issues. In this chapter, we present the findings on the respondents' self-esteem, mental health, body image, views about sex roles and family, sources of sex education, and relationships with peers and parents.

B. SELF-ESTEEM

In their search for answers to why knowledgeable young people make negative health decisions, researchers have found a strong relationship between a high level of self-esteem and sound lifestyle habits. The terms "self-concept" and "self-esteem" are often used interchangeably; strictly speaking, self-concept refers to an individual's description of his/her abilities, personality and relationships with others, and self-esteem refers to the value an individual places on these personal characteristics.

After extensive review of the self-esteem issue and item pre-testing, a scale composed of six items dealing with friends, appearance, decision-making and feelings of confidence was developed. It was assumed that the students placed similar value on these attributes, and the extent to which they saw them as their own was a valid measure of self-esteem. Table 7.1 presents the percentage of students responding "most of the time" to the items on the self-esteem scale.

TABLE 7.1
PERCENTAGE OF YOUNG PEOPLE RESPONDING "MOST OF THE TIME"
TO ITEMS ON THE SELF-ESTEEM SCALE

ITEM	GRADE 4	GRADE 7	GRADE 10
I feel left out of things.	15.7	10.4	6.2
I have trouble making decisions.	23.6	11.8	8.6
I wish I were someone else.	15.5	10.6	7.1
I have confidence in myself.	59.6	53.8	52.1
I make friends easily.	46.5	51.6	58.3
I feel good about the way I look.	49.3	46.5	47.2

These results show a decline from Grade 4 to Grade 10 in the proportion of students feeling left out of things, having trouble making decisions, and wishing they were someone else. One-half of the students had confidence in themselves, while self-confidence slightly decreased among older ones. Even though the proportion of students who made friends easily increased by Grade 10, a large proportion in all grades had some difficulties in making friends. Almost half of all respondents felt positive about their appearance.

Other than for the item "I feel left out of things" where more females reported feeling left out than males, there were only small gender differences on the self-esteem items at Grade 4. This changes considerably by Grades 7 and 10, with more males responding positively on all items except "I make friends easily."

Each student's responses on the six items were aggregated to produce a score on the self-esteem scale, and the students were then divided into three groupings (low, moderate and high) based on those scores. This three-way breakdown was used to compare the students' self-esteem scores with their responses to other items from the surveys.

Table 7.2 indicates that the self-esteem of Grades 7 and 10 students is directly linked to their perception of their physical appearance (i.e., complexion and weight). It is also strongly related to their responses to the mental health items ("I get frustrated," "I get headaches," and "I cannot sleep worrying about things"), relationship with parents, and satisfaction with school. The high scorers on the physical activity level measure were more likely to have higher self-esteem. In all cases, the higher the score a student obtained on the self-esteem scale, the greater the likelihood his or her attitude on behaviour will be positive.

TABLE 7.2
RESPONSES TO SELECTED ITEMS OF STUDENTS SCORING IN THE LOW
AND HIGH THIRDS OF THE SELF-ESTEEM SCALE
(In Percentages for Particular Response Alternatives)

ITEM	SELF-ESTEEM SCALE			
	Grade 7		Grade 10	
	Low 3rd.	High 3rd.	Low 3rd.	High 3rd.
I wish my complexion were better. (agree)	60.3	28.1	71.8	44.6
I need to lose weight. (agree)	41.3	20.1	49.9	26.7
I need to get more exercise. (agree)	59.1	33.6	75.9	51.6
My parents understand me. (most of the time)	37.2	74.7	26.6	60.3
My parents expect too much of me. (most of the time)	19.9	5.7	18.7	9.5
I would like to leave home. (most of the time)	15.0	3.7	17.6	8.1
I have a happy home life. (agree)	66.8	92.6	63.4	87.6
I get frustrated. (most of the time)	28.4	13.8	--	--
I get headaches. (most of the time)	21.0	6.4	17.1	6.4
I cannot sleep worrying about things. (most of the time)	32.6	12.7	28.3	13.3
I am happy at school. (agree)	46.5	75.2	52.0	73.2

The findings of this study concur with those of others which suggest that the higher the self-esteem, the more healthful the behaviour. Therefore, the development of a high level of self-esteem in young Canadians should be considered an important health goal.

C. MENTAL HEALTH

In a world that is becoming more stressful for adolescents because of high unemployment, the potential of nuclear war, family breakdown and a myriad of growing-up problems, the mental health of young Canadians is a serious concern. High suicide rates, excessive drug use, anxiety, depression and inability to sleep are all indicators that the mental health of our young must be addressed. One goal of this study was to gather more information on their mental health. Table 7.3 summarizes the findings for survey items concerned with aspects of mental health.

TABLE 7.3
PERCENTAGE OF YOUNG PEOPLE RESPONDING "MOST OF THE TIME"
TO MENTAL HEALTH ITEMS

ITEM	GRADE 4	GRADE 7	GRADE 10
I get enough sleep at night.	64.7	58.4	43.2
I cannot sleep worrying about things.	27.5	22.3	20.4
I get headaches.	--	13.0	11.3
I feel depressed.	--	5.9	7.1

There was a decrease from Grade 4 to Grade 10 in the proportion of young people who indicated they get enough sleep "most of the time." A surprisingly high number of students, particularly Grade 4s, said they cannot sleep "most of the time" because of worrying about things. Getting

headaches was a frequent problem for a small proportion of the Grade 7s and 10s. Over half of both the Grade 7s and 10s were depressed "some of the time" or "most of the time." More females than males reported these signs and symptoms of poor mental health.

D. BODY IMAGE

As a result of the combination of physical and emotional changes during the teen years, adolescent boys and girls often feel uncertain and self-conscious about themselves. Because of the rapid changes, the associated confusion with moving to independence, and the need for peer acceptance, teenagers' perceptions of their body image often influence their health lifestyle decisions. We surveyed young people's opinion of their body image, and related this to other health attitudes and behaviours.

Three questions were asked of the Grade 7s and 10s on body appearance, two on weight and one on complexion. In addition, one question was asked on the importance of physical appearance to success.

TABLE 7.4
PERCENTAGE OF GRADES 7 AND 10 STUDENTS AGREEING TO BODY IMAGE ITEMS

ITEM	GRADE 7	GRADE 10
I need to lose weight.	31.2	37.7
I need to gain weight.	15.6	18.4
I wish my complexion (face, skin) were better.	44.9	58.5
To be successful, physical appearance is important.	39.8	51.8

As expected, more young people felt the need to lose weight than those who reported the need to gain weight (see Table 7.4). The proportion of adolescents who said they need to lose weight increased slightly from Grade 7 to 10 and, somewhat surprisingly, there was also a small increase in the proportion who wish to gain weight. Large percentages of both Grade 7 and 10 respondents expressed concern about their complexion. The increase in concern about complexion from Grade 7 to Grade 10 paralleled an increase in the importance attached to appearance.

Gender differences in responses to the body image items were extensive. More females reported the need for weight loss than males at both Grade 7 (39.0% compared to 23.4%) and Grade 10 (53.2% to 21.4%), and a wish for better complexion at Grade 7 (55.1% to 34.8%) and Grade 10 (66.2% to 50.2%). More males than females desired a gain in weight both at Grade 7 (19.1% to 12.1%) and Grade 10 (29.1% to 8.6%)

E. PARENT/CHILD RELATIONSHIPS

Specialists on the health of families agree that by far the most important factor in well-being is the positive interaction among family members. In this study, we obtained the attitudes of young people toward their parents, and compared them to their responses to other health attitude and behaviour items. Six questions regarding parent/child relationships were asked at Grade 4, and seven at each of Grades 7 and 10 (see Table 7.5).

TABLE 7.5
PERCENTAGE OF YOUNG PEOPLE RESPONDING "MOST OF THE TIME" OR "AGREE"
TO PARENT/CHILD RELATIONSHIP ITEMS*

ITEM	GRADE 4	GRADE 7	GRADE 10
My parents understand me.	66.4	55.7	45.4
My parents expect too much of me.	16.7	11.7	13.0
I have arguments with my parents.	--	11.6	15.7
I would like to leave home.	10.3	8.2	11.8
I have fun with my parents.	71.1	58.1	40.4
I have a happy home life.	85.4	81.4	78.1
My parents trust me.	73.5	70.0	70.5

*For the first five items, the response was "most of the time," and for the last two it was "agree."

Not only do a substantial proportion of young people have problems with their parents, but also there tends to be a sharp decline in the quality of relationships with parents from Grade 4 to Grade 10.

The gender differences in the responses to the relationship items were small at Grade 4, but were greater from Grades 7 and 10. Girls were less likely than boys to get along with their parents.

The parent/child relationship items were combined in a scale and respondents' scores on this scale were compared with other measures. Those who reported positive relationships with their parents (i.e., high scorers on the scale) were more likely to: have a better attitude toward safety issues; have high self-esteem; have fewer mental health concerns; not smoke, drink or take drugs; and be happy at school.

F. SEX AND FAMILY ROLES

Sex-role learning and its impact on emotional and physical health, and on social relationships have been well documented. Two questions were asked of Grade 7 and 10 students on attitudes about careers. Two other questions surveyed attitudes toward expressing feelings and asking for help (Table 7.6).

In addition, three questions were asked of the Grade 10 students regarding where they learned most of their information regarding sex: from parents, from friends or from school classes.

TABLE 7.6
PERCENTAGE OF YOUNG PEOPLE AGREEING TO GENDER-RELATED ITEMS

ITEM	GRADE 7		GRADE 10	
	Male	Female	Male	Female
A woman can have a career while caring for a family.	61.6	73.9	69.1	83.3
Some careers are best suited for men.	52.1	33.7	63.9	36.8
You should be able to talk about your feelings with others.	66.3	77.7	79.7	90.3
To ask for help is a sign of weakness.	18.9	16.2	14.2	8.8

Statistically significant gender differences were found for both career-related items, with girls more supportive of the viability of female careers. The responses to the two questions dealing with feelings and vulnerability also showed marked gender differences, with girls more inclined to show their feelings and less inclined to feel that asking for help is a sign of weakness.

Forty per cent of the young people in Grade 10 reported that most of what they learned about sex was from their friends. However, more males (45.4%) than females (36.2%) reported this. Parents (25.8%) and school classes (25.8%) were a distant second to friends as the main source of sex information. Only 18.9 per cent of males compared to 32.2 per cent of females indicated that parents were their main source.

G. PEERS

Two questions on peer relationships were asked of the Grade 4s and four of the Grade 7s and 10s (see Table 7.7). Three of these Grade 7 and 10 questions were concerned with peer influence regarding the use of alcohol, marijuana and cigarettes, and one was concerned with the degree of encouragement by friends to do wrong or dangerous things.

TABLE 7.7
PERCENTAGE OF YOUNG PEOPLE RESPONDING TO PEER INFLUENCE ITEMS

	GRADE 4			GRADE 7			GRADE 10		
	Rarely	Some of the Time	Most of the Time	Rarely	Some of the time	Most of the Time	Rarely	Some of the Time	Most of the Time
I do what my friends want me to do.	24.0	58.9	17.1	--	--	--	--	--	--
My friends encourage me to do things I know are dangerous.	60.9	26.6	12.5	--	--	--	--	--	--
My friends encourage me to do things I know are wrong.	--	--	--	65.6	29.1	5.2	74.1	22.9	2.9
I feel pressure from my friends to smoke cigarettes.	--	--	--	84.1	10.8	5.0	90.4	7.9	1.8
I feel pressure from my friends to drink alcohol.	--	--	--	89.7	6.4	3.9	83.6	12.9	3.5
I feel pressure from my friends to use marijuana.	--	--	--	93.3	3.3	3.4	93.4	4.7	1.9

Many educators associate peer pressure with teenage years, but these results indicate that all young people feel pressure from friends to do things that may be harmful.

Grade 7 students reported greater pressure from peers to smoke cigarettes and use marijuana than those in Grade 10, but the reverse pattern occurred for pressure regarding alcohol use. Nevertheless, in general, the vast majority of students said they experience little or no peer pressure to drink, smoke or use cannabis.

Slightly more males than females in both Grades 7 and 10 reported pressure from their peers to smoke cigarettes, drink alcohol and use marijuana. Larger gender differences occurred for the items on encouragement to do wrong or dangerous things, with males again feeling greater pressure.

The students who said their friends encourage them to do things that are wrong (Grades 7 and 10) or dangerous (Grade 4) were more likely to make less positive responses to items on: safety, self-esteem, parent/child relationships, and mental health.

H. PROVINCIAL DIFFERENCES

There were only small differences from province to province in the body image, parent/child relationship, and items on sex and family roles. On the other hand, there were significant provincial differences in Grade 10 on the mental health and self-esteem items.

The schools in two of the provinces take on a greater role in sex education than in the others, as evidenced by the high proportion of their Grade 7s and 10s who reported they learned about sex in school classes.

CHAPTER VIII

SUMMARY AND CONCLUSIONS

A. INTRODUCTION

The study was designed to examine the health attitudes and behaviours of young Canadians and to use this information as the basis for health promotion initiatives. The total sample surveyed comprised 33 111 students from Grades 4, 7 and 10 representing the age groups 9, 12 and 15. The survey instruments included the following topics: nutrition, physical and leisure activities; alcohol, drugs and cigarettes; dental health; safety; parent/child relationships; peer influence; self-esteem; body image; sex and family roles; and mental health. The findings have illuminated problem areas and, just as importantly, identified health attitudes that are clearly linked to behaviours. The main findings are presented below in the form of problems that require some attention, relationships that may help direct health promotion activities, other relevant findings and significant provincial differences.

B. PROBLEM AREAS

1. Nutrition

- . Nearly half the young people do not eat a balanced diet.
- . Approximately 30 per cent of 9-year-olds do not eat vegetables daily.
- . Twenty per cent of 15-year-olds rarely eat breakfast.
- . Two-thirds of young people have diets high in fat and one-quarter, high in sugar.
- . As young people get older, they are less likely to eat yellow vegetables, fish, beans, and whole grain cereals and breads.
- . Boys typically eat more high-fat and-high sugar foods than girls.

2. Physical and Leisure-time Activities

- . Twenty-five per cent of 15-year-olds do not participate in physical education classes in school.
- . Only one-sixth of 9- and 12-year-olds and one-third of 15-year-olds take daily physical education classes.
- . Physical activity level declines from age 9 to age 15.
- . Girls are substantially less physically active than boys.

3. Alcohol, Cigarettes and Cannabis Use

- . Two out of five 15-year-olds drink alcohol at least twice a month.
- . Thirty per cent of the 15-year-old drinkers of alcohol typically drink five or more drinks at one time.
- . Cigarettes are smoked by over 10 per cent of 12-year-olds and over 25 per cent of 15-year-olds, with more girls than boys in the latter group.
- . One-fifth of the 15-year-olds reported that they use cannabis, and one-eighth are regular (at least 2 or 3 times a month) users.

4. Dental Health

- . Nearly one-third said they do not brush their teeth at least twice a day.
- . Only one-fifth floss their teeth twice a week.
- . Boys typically take poorer care of their teeth than girls.

5. Safety

- . As young people get older, they show an increased willingness to take risks with personal safety; for example, in the use of seat belts.
- . Boys take far more risks with safety than girls.

6. Self and Others

- . Boys' self-esteem is typically more positive than girls'.
- . Over one-quarter of the 9-year-olds reported that they cannot sleep because of worrying about things.
- . The quality of the relationship between young people and their parents declines as they get older. More boys reported a positive relationship with their parents than girls.

C. RELATIONSHIPS

The relationships found between the health attitudes held by young people and their behaviours are particularly important in the design of interventions. Generally speaking, 9-year-olds' health behaviour could not be linked to the attitudes they held, but there were many instances of strong relationships between behaviours and attitudes for 12- and 15-year-olds. Particularly relevant findings in this regard were:

- . A common pattern of risk-taking is evident among young people that cuts across diet, safety, dental health, alcohol, cigarettes and marijuana use (e.g., those who smoke cigarettes are more likely to display other negative health attitudes and behaviours).
- . When a young person has a positive relationship with his/her parents, he/she is more likely to have a healthy lifestyle.
- . A young person's self-esteem is related to his/her (1) attitude about physical appearance, (2) mental health, (3) relationship with parents, and (4) satisfaction with school (i.e., the more positive the self-esteem, the greater the likelihood of other positive attitudes).
- . Positive attitudes to nutrition and dental health are related to positive behaviours in these areas.
- . The more physically-active young people are more likely than the less active to be involved in a variety of other leisure-time activities.
- . The more physically-active young people are more likely than the less active to have self-confidence and a positive relationship with their parents, and less likely to show symptoms of mental health concerns.
- . Television watching between 15 and 30 hours per week does not appear to be related to negative health patterns.
- . Users of alcohol, marijuana and cigarettes are more likely than non-users to take other health related risks, have negative attitudes toward parents and school, have less positive self-esteem, and do less homework and studying.

D. OTHER FINDINGS

There are many other relevant findings from the study, including some which indicate positive health attitudes and behaviours. A sampling follows:

- . Nine-year-olds average 13 hours of watching television a week, 12-year-olds 18 hours, and 15-year-olds 15.
- . Over two-fifths of 15-year-olds work part-time.
- . Over two-fifths of 9- and 12-year-olds play video games twice or more a week.
- . Fifteen-year-olds say they learn more about sex from friends than from schools or parents.
- . Most young people would not ride with a stranger, and feel hitchhiking is dangerous.

E. PROVINCIAL DIFFERENCES

Significant differences existed among the provinces and territories on a number of measures. As a result, prioritizing of the major areas of concern must inevitably differ across the country. Individual reports have been prepared that outline the findings for each province and territory which should enable health education and promotion personnel in each setting to respond in a specific way to the information that is most relevant to them.

Some of the major differences are:

- . Only one of eight 15-year-olds in one province wears seat belts regularly compared with nearly six of eight in another province (in part related to differences in seat belt legislation).
- . There was a difference of 20 percentage points from the highest to the lowest province in the proportion of 15-year-olds eating a balanced diet.
- . Alcohol and cigarette use differed substantially across the provinces. For example, 20 per cent of 15-year-olds smoked cigarettes in one province compared to 35 per cent in another.
- . Schools in some provinces are far more likely than those in others to be children's major source of information about sex.

F. CONCLUDING STATEMENT

A number of relationships were identified in this study that require further research. For example, because our measure of the socioeconomic status of the respondents was imprecise, we could offer only tentative explanations of health attitudes and behaviours associated with this factor. Similarly, the concept that certain individuals (risk-takers) adopt a wide range of attitudes and behaviours that endanger health needs further study.

Throughout the course of the study, we found enthusiasm for the purpose and direction of the research, and encouragement to expedite the dissemination of the results. The Canada-wide advisory group of health educators that was established as a result of the first study has indicated its commitment to this study, and is prepared to lead in the development of interventions that will improve the health of all young Canadians.

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AND
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NOTE: The titles and positions listed here represent those held
at the time of the survey.

